# PART Env-Dw 707 GENERAL MONITORING REQUIREMENTS; LABORATORY ANALYTICAL METHODS

Env-Dw 707.01 <u>Purpose</u>. The purpose of this part is to establish generally-applicable requirements for monitoring by public water systems (PWS), including sampling and analysis, reporting, and compliance with water quality standards.

## Env-Dw 707.02 Adjustments to Monitoring Requirements.

- (a) The department shall require more frequent monitoring than that specified in Env-Dw 708 through Env-Dw 713 if the department determines that additional monitoring is necessary to confirm that a water source is capable of consistently producing an adequate supply of water that meets drinking water quality standards, because:
  - (1) The data submitted for any given parameter is inconsistent with the preponderance of data elements submitted for that water source for the same parameter;
  - (2) The data submitted for the water source exhibits constituents from known or unknown sources of contamination;
  - (3) Potential or known sources of contamination are located in the source water protection area of the water source;
  - (4) Treatment installed to treat water that exceeds an MCL has not consistently met design standards; or
  - (5) The data submitted after treatment indicates inconsistent contaminant removal is occurring.
- (b) If sample results indicate the presence of contaminants for which MCLs are not listed in Env-Dw 702 through Env-Dw 706 but which are included in the ambient groundwater quality standards (AGQS) specified in Env-Or 603.03, the PWS shall comply with the AGQS specified in Env-Or 603.03.

## Env-Dw 707.03 Monitoring of Consecutive Public Water Systems.

- (a) Subject to (b), below, if a PWS supplies water to one or more other public water systems, the department shall eliminate the requirements imposed on the consecutive systems by Env-Dw 708 through Env-Dw 713.
- (b) Each consecutive system shall monitor for bacterial contaminants as specified in Env-Dw 709 and for corrosion control parameters as specified in Env-Ws 381 or successor rules in Env-Dw 714, in accordance with the schedule issued by the department pursuant to Env-Dw 708.

## Env-Dw 707.04 Validity of Laboratory Results.

- (a) The department shall not use sampling or laboratory results if the department determines that the data is:
  - (1) From an obvious sampling or laboratory error from known errors in collection, processing, or transcription;
  - (2) A technical impossibility;
  - (3) Inconsistent with the preponderance of data elements for the same parameter from the same source or system; or
  - (4) From a laboratory not accredited in accordance with Env-C 300 when such accreditation is required for the particular analysis.

- (b) Unless otherwise noted, any result that is below the detection limit of a test method approved for use pursuant to Env-Dw 707.07 shall be calculated as zero for the purpose of determining compliance.
- (c) All chemical concentration data submitted to the department for compliance purposes shall be reported in the same units used for the specified MCL, MCLG, SMCL, or MRDL, as applicable.

Env-Dw 707.05 Additional Sampling. The department shall require additional samples to be collected for:

- (a) Any samples exceeding the applicable MCL, SMCL, or MRDL specified in Env-Dw 702 through Env-Dw 706; and
  - (b) Any samples for which the results are invalid as specified in Env-Dw 707.04(a).

Env-Dw 707.06 Sample Analysis Methods; Approval of Alternative Methods.

- (a) Acceptable laboratory methods shall be those specified in 40 CFR 141, 142, or 143, as applicable.
- (b) The owner of a PWS having its own laboratory or the owner of a laboratory used by one or more PWS who wishes to use a method other than one specified in (a), above, shall obtain written permission from the department as specified in (c) through (e), below, prior to using any alternative method.
- (c) The owner shall submit a request to use an alternative method in writing to the program manager of the NH environmental laboratory accreditation program (NH ELAP) at the address specified in Env-C 303.01(a).
  - (d) The request shall include all relevant information, including:
    - (1) The name and EPA identifier of each PWS for which the alternative method would be used;
    - (2) The reason(s) for requesting approval of the alternate method; and
    - (3) Analytical data demonstrating the precision and accuracy of the alternative method as it relates to the determination of compliance with the applicable standard.
- (e) An alternative technique shall be approved only if the NH ELAP program manager, with the concurrence of the administrator of the U.S. EPA, determines that the method is equivalent to or better than the prescribed test in both precision and accuracy as it relates to the determination of compliance with the applicable standard.
- (f) The use of an alternative analytical technique shall not decrease the frequency of monitoring required by this chapter.

Env-Dw 707.07 Accredited Laboratory Required.

- (a) Subject to (c) and (d), below, compliance determinations for the contaminant categories listed in (b), below, shall be based on data provided by a laboratory accredited pursuant to Env-C 300 for the test being conducted.
  - (b) The contaminant categories covered by (a), above, shall be as follows:
    - (1) Microbiological, as specified in Env-Dw 702;
    - (2) Radiological, as specified in Env-Dw 703;
    - (3) Inorganics, as specified in Env-Dw 704;
    - (4) Organics, as specified in Env-Dw 705; and

- (5) Secondaries, as specified in Env-Dw 706.
- (c) Samples for turbidity, chlorine residual, temperature, and pH may be performed by any individual qualified to perform the test.
- (d) If a sample is analyzed by a method approved pursuant to Env-Dw 707.07, the laboratory performing the analysis need not be accredited by NH ELAP.

Env-Dw 707.08 <u>Additional Sampling by Department</u>. Nothing in this chapter shall be construed to preclude the department, or any duly designated representative of the department, from:

- (a) Collecting samples; or
- (b) Using the results from such samples to determine compliance by a PWS with the applicable requirements of this chapter.

#### PART Env-Dw 708 SAMPLING SCHEDULES

Env-Dw 708.01 Establishment and Modification of Sampling Schedules.

- (a) The department shall provide each system owner with a sampling schedule in writing upon being notified by the system that it has commenced delivering water to customers.
- (b) The sampling schedule shall identify the parameters to be tested, the points at which samples are to be collected, and the frequency of sampling for that particular system, consistent with those specified in Env-Dw 708.02 through Env-Dw 708.03.
- (c) The sampling schedule shall be established for each parameter for which the sample is being collected based on:
  - (1) The size and type of PWS for which the sampling schedule is prepared;
  - (2) The concentration of the parameter;
  - (3) The variability of the parameter; and
  - (4) The reliability of the treatment process.
- (c) The department shall notify each PWS owner in writing of any modification(s) to the sampling schedule established pursuant to this section that are required based on a change in federal requirements adopted by the state, the concentration of regulated parameters, new well or blend of well(s), new treatment, new potential sources of contamination found in the protective radius of the well(s), or other issues such as those identified based on an inspection.
- (d) If the owner of a PWS wishes to modify the sampling schedule established for the PWS, the owner shall proceed in accordance with:
  - (1) Env-Dw 708.04, for changes to sampling points;
  - (2) Env-Dw 708.11, for reductions in monitoring for sources not used as potable water;
  - (3) Env-Dw 709, for modifications to bacteria monitoring;
  - (3) Env-Dw 710.07, for modifications to radionuclide monitoring;

#### Env-Dw 708.02 Monitoring Within A Compliance Period.

(a) Each PWS owner shall monitor for each parameter within each compliance period designated for

that parameter in accordance with the system's sampling schedule established pursuant to Env-Dw 708.01.

- (b) Subject to (c) and (d), below, if a PWS owner fails to submit a sample during the assigned monitoring period, the owner shall submit a sample, designated as a make-up sample, as soon as the owner discovers the failure or upon being notified of the failure by the department, whichever is earlier.
- (c) If a PWS owner fails to submit an initial radionuclide sample as required in Env-Dw 710.05, the owner shall collect a sample in the quarter missed during the subsequent year.
- (d) If a PWS owner fails to submit an  $\underline{E}$ .  $\underline{coli}$  source sample as required in Env-Dw 717, the owner shall collect a sample the month after completion of the required monthly sampling.

Env-Dw 708.03 Monitoring for Ground and Surface Water Systems. Unless otherwise noted, a PWS owner using a combination of groundwater and surface water shall monitor as if the source is a surface water supply.

Env-Dw 708.04 Sampling Points; Changes to Sampling Points.

- (a) The PWS owner shall collect the required sample(s) at each sampling point designated in the sampling schedule.
- (b) If a PWS owner believes that a sampling point designated in the sampling schedule is not representative of the water being distributed to persons served by the system, the owner shall submit a written request to the department for a change to the sampling point for the affected parameter(s).
  - (c) A request submitted pursuant to (b), above, shall include the following:
    - (1) The name of the PWS;
    - (2) The EPA identifier for the PWS;
    - (3) The existing and proposed sampling points;
    - (4) Whether the change is proposed for all parameters or less than all parameters and, if less than all, the specific parameter(s) for which the change is being requested; and
    - (5) An explanation of the reason for the request.
  - (d) The department shall approve the new sampling point(s) if the department determines that:
    - (1) The proposed sampling point(s) is/are at least as representative of the water being distributed to persons served by the system as the existing sampling point(s);
    - (2) Changing the sampling point(s) in accordance with the request will provide an operational benefit to the system; and
    - (3) The new sampling point(s) will be in compliance with all federal requirements.

Env-Dw 708.05 Types of Samples Collected.

- (a) Composite samples shall not be allowed; rather, a PWS owner shall collect one discrete sample from each sampling point.
- (b) If a PWS draws water from more than one source and the sources are combined before distribution, a sample of the combined or blended water shall be taken, if specified in the sampling schedule, to satisfy that system's chemical monitoring requirements as specified in Env-Dw 707 and Env-Dw 710 through Env-Dw 713.

- (c) The department shall approve a blended sample if:
  - (1) The sources are combined before entry to the distribution system;
  - (2) Where there are multiple sources, the sources are operated simultaneously or automatically alternated between pump operating cycles; and
  - (3) The sample is collected at the entry point to the distribution system.

## Env-Dw 708.06 Separate Sampling Taps.

- (a) Each source shall have a separate sampling tap except where conditions, such as vacuum manifold, prevent such tap installation.
  - (b) Where treatment is in use, separate sampling taps shall be installed prior to and after treatment.

Env-Dw 708.07 <u>Averaging Results</u>. If a confirmation sample is collected for any parameter, the results of the initial and confirmation sample shall be averaged unless otherwise specified in the parameter-specific section.

Env-Dw 708.08 <u>Completion of Monitoring</u>. The monitoring requirements for a PWS shall not be complete until all required samples(s) have been collected and analyzed, and the results received by the department, in accordance with all applicable monitoring and reporting requirements specified in Env-Ws 300 and successor rules in subtitle Env-Dw.

## Env-Dw 708.09 Public Notice of Non-Compliance.

- (a) Subject to (b), below, the PWS owner of a shall provide public notice in accordance with Env-Ws 351, Env-Ws 352, and Env-Ws 354 through Env-Ws 359, or successor rules in Env-Dw 800, if any violation occurs of any applicable MCL, MRDL, monitoring requirement, or treatment technique established in:
  - (1) RSA 485;
  - (2) Env-Dw 702 through Env-Dw 706;
  - (3) Env-Dw 707 through Env-Dw 713;
  - (4) Env-Ws 341 through Env-Ws 347 or successor rules in Env-Dw 700;
  - (5) Env-Ws 381 or successor rules in Env-Dw 714; or
  - (6) Env-Dw715 through Env-Dw 717.
- (b) If a PWS has a distribution system with portions that are hydraulically separate from other parts of the distribution system, the owner may request approval from the department pursuant to Env-Ws 351.06 or successor rule in Env-Dw 801 to limit the public notice to users of only that part of the PWS in which the applicable standard is exceeded.

# Env-Dw 708.10 Collection of Additional Samples by the PWS Owner.

- (a) A PWS owner may collect more samples than the minimum required and submit the analytical results to the department.
- (b) In order for sample results submitted pursuant to (a), above, to be used for compliance calculations, the samples shall be uniformly distributed over the appropriate monitoring interval, sampling points, and sources, or the data shall otherwise be representative of the water being consumed.

## Env-Dw 708.11 Removing a Source; Reducing Monitoring Responsibility.

- (a) Subject to (b), below, a PWS owner shall comply with all monitoring requirements for a source unless and until:
  - (1) The source is physically disconnected from the distribution system piping by removing at least 12 inches of piping and capping both cut ends of the remaining pipe; and
  - (2) The owner has notified the department in writing that the source has been disconnected.
- (b) A water system designed or intended as a public water system, where there are fewer than 15 service connections and fewer than 25 people being served, shall be subject to the minimum monitoring requirements in Env-Dw 708.12.
- (c) To reduce the frequency and extent of monitoring requirements when a source has not been removed as provided in (a), above, but is not used for human consumption due to the inability of the current water supply to meet the chemical standards specified in Env-Dw 701-706, the following conditions shall be met:
  - (1) The water supply to which decreased monitoring is requested shall be clearly designated and labeled for non-potable use;
  - (2) The PWS owner shall comply with the minimum monitoring requirements in Env-Dw 708.12;
  - (3) The PWS owner shall provide potable water from an alternative source; and
  - (4) If the potable water being provided is bottled water, the source shall have been approved pursuant to Env-Dw 303 or predecessor rules in Env-Ws 389.
- (d) To reactivate a source, all applicable monitoring requirements specified in Env-Dw 707 through Env-Dw 713 shall be completed prior to distributing any water from the source as potable water.

# Env-Dw 708.12 Minimum Monitoring Requirements. Minimum monitoring shall consist of:

- (a) Quarterly bacteriological analysis in accordance with Env-Dw 709;
- (b) Annual nitrate analysis in accordance with Env-Dw 711.19 through Env-Dw 711.23; and
- (c) Nitrite analysis every 3 years in accordance with Env-Dw 711.24 through Env-Dw 711.29.

#### PART Env-Dw 709 MONITORING FOR MICROBIOLOGICAL CONTAMINANTS

Env-Dw 709.01 <u>Applicability</u>. The rules in this part shall apply to all public water systems (PWS), including community water systems (CWS), non-transient non-community water systems (NTNC), and transient non-community water systems (TNC).

# Env-Dw 709.02 Collection Location of Bacterial Samples.

- (a) Subject to (d) and (e), below, a PWS owner shall collect total coliform samples at the sampling points specified in the sampling schedule established pursuant to Env-Dw 708.01, which shall be representative of water throughout the distribution system.
- (b) If the PWS owner wishes to collect samples at alternate points, the owner shall seek approval of the proposed sampling points as specified in Env-Dw 708.04.
- (c) If the department determines that the sampling points for total coliforms are not representative of water throughout the distribution system, the PWS owner shall not collect samples until the department

revises the sampling schedule to identify new sampling points.

- (d) Repeat samples required by Env-Dw 709.10 shall be collected at the locations specified in that section.
- (e) The additional 5 routine samples required by Env-Dw 709.11 shall be collected at the locations specified in that section.

#### Env-Dw 709.03 Collection Intervals of Bacteria Samples.

- (a) The owner of a PWS that serves greater than 4,900 persons shall collect bacteria samples on at least 2 separate occasions at least 5 days apart throughout the sampling month.
- (b) Each group of samples collected pursuant to (a), above, shall contain as close to the same number of samples as possible.
- (c) The owner of a PWS that uses only groundwater not under the direct influence of surface water as defined in Env-Ws 302 or successor rules in Env-Dw 100 and serves 4,900 persons or fewer, may collect all required samples on a single day only if the samples are obtained at different sampling points, except that multiple samples from a sample site shall be allowed if the PWS has fewer sampling sites than the number of samples to be collected.

Env-Dw 709.04 <u>General System Evaluation Bacteria Samples</u>. Any bacteria sample collected in addition to the routine, make-up, or repeat samples for a PWS shall be used to determine compliance if the sample:

- (1) Is representative of water being supplied to consumers; and
- (2) Is positive for Escherichia coli (E. coli) bacteria.

## Env-Dw 709.05 Frequency of Routine Monitoring of Coliform Bacteria for CWS.

(a) Subject to (b) and (c), below, the minimum monitoring frequency for total coliforms for CWS shall be based on the population served by the system, as specified in Table 709-1, below:

Table 709-1
Frequency of Sampling for Community Water Systems

Population Served		on Served	Minimum number of
Lower Lim	Lower Limit Upper Limit		samples per month
25	to	1,000	1
1,001	to	2,500	2
2,501	to	3,300	3
3,301	to	4,100	4
4,101	to	4,900	5
4,901	to	5,800	6
5,801	to	6,700	7
6,701	to	7,600	8
7,601	to	8,500	9
8,501	to	12,900	10
12,901	to	17,200	15
17,201	to	21,500	20
21,501	to	25,000	25
25,001	to	33,000	30
33,001	to	41,000	40

41,001	to	50,000	50
50,001	to	59,000	60
59,001	to	70,000	70
70,001	to	83,000	80
83,001	to	96,000	90
96,001	to	130,000	100
130,001	to	220,000	120
220,001	to	320,000	150
320,001	to	450,000	180
450,001	to	600,000	210
600,001	to	780,000	240
780,001	to	970,000	270
970,001	to	1,230,000	300
1,230,001	to	1,520,000	330
1,520,001	to	1,850,000	360

- (b) The owner of a CWS whose population varies seasonally, such as a community having a large influx of summer residents or a college community, shall average the daily population over each sampling period to determine the number of samples required in each sampling period.
- (c) The owner of a CWS serving 25 to 1,000 persons may submit to the department a written request for a reduction from the monitoring frequency specified in (a), above, to no less than one sample per calendar quarter.
  - (d) A request submitted pursuant to (c), above, shall include the following information:
    - (1) The name of the CWS:
    - (2) The EPA identifier for the CWS; and
    - (3) The rationale for the reduction in monitoring, based on the criteria listed in (e), below.
  - (e) The department shall approve a request submitted pursuant to (c), above, if it determines that:
    - (1) The CWS has had no confirmed presence of coliform bacteria within the past 12 months;
    - (2) The CWS owner has submitted all required bacteria samples within the past 12 months;
    - (3) The CWS's most recent sanitary survey shows that the system is supplied solely by protected groundwater and is free of sanitary defects as specified in Env-Ws 306 or successor rules in Env-Dw 720;
    - (4) The CWS's sanitary protective area does not contain any structure, item, or activity that poses the risk of bacterial contamination; and
    - (5) The CWS has not continuously used a bacterial disinfection/inactivation treatment process in the previous 12 months.
- (f) The department shall notify the CWS owner in writing of its decision on the request to reduce the frequency of bacteria monitoring. If the request is denied, the notice shall specify the reason(s) for the denial.

## Env-Dw 709.06 Return to Standard Monitoring Frequency for CWS.

- (a) A CWS owner monitoring bacteria at a reduced frequency under Env-Dw 709.05(c) through (f) shall return to monitoring bacteria at the standard frequency specified in Env-Dw 709.05(a) if:
  - (1) The CWS has a confirmed presence of total coliforms;

- (2) The CWS owner fails to submit 2 or more required routine bacteria samples within an 18 month period;
- (3) A sanitary survey identifies a sanitary defect that has not been corrected within the time frame set forth pursuant to Env-Dw 717 or Env-Ws 306 or successor rules in Env-Dw 720;
- (4) The CWS's sanitary protective area contains a structure, item, or activity that poses the risk of bacterial contamination;
- (5) The CWS owner has installed a continuously operating bacterial disinfection/inactivation treatment process within 6 months of incurring a bacterial MCL violation;
- (6) The department determines that the groundwater source for the CWS is under the direct influence of surface water;
- (7) A new source is added to the CWS; or
- (8) The physical configuration of the CWS warrants additional monitoring to accurately determine water quality.
- (b) The department shall notify the CWS owner in writing if it determines that any of the criteria listed in (a), above, has been met and so the system has to return to monitoring bacteria at the standard frequency.

# Env-Dw 709.07 Frequency of Routine Monitoring of Coliform Bacteria for Non-Community Systems.

- (a) The owner of a non-community water system (NCS) using only groundwater not under the direct influence of surface water, as defined in Env-Ws 302 or successor rules in Env-Dw 100, shall monitor for bacteria based on the number of persons served, as follows:
  - (1) If the NCS serves 1,000 persons or fewer per month, the owner shall collect one sample during each calendar quarter that the NCS provides water to the public, subject to (f) through (i), below; and
  - (2) If the NCS serves more than 1,000 persons during any month, the owner shall monitor bacteria at the same frequency as a like-sized community water system, as specified in Env-Dw 709.05(a), except that the department shall reduce this monitoring frequency, in writing, to no less than once per month for any month the NCS serves 1,000 persons or fewer, at the request of the NCS.
- (b) If the number of persons served by an NCS is event driven, such as a racetrack, fairgrounds, or concert venue, the owner shall monitor bacteria at the same frequency as a like-sized community water system, as specified in Env-Dw 709.05(a), using the average daily population calculated over a one month period.
- (c) The owner of an NCS using groundwater under the direct influence of surface water as defined in Env-Ws 302 or successor rules in Env-Dw 100, shall monitor for bacteria at the same frequency as a like-sized community system, as specified in Env-Dw 709.05(a), beginning 6 months after the department determines that the groundwater is under the direct influence of surface water.
- (d) The owner of an NCS using surface water, in total or in part, shall monitor bacteria at the same frequency as a like-sized community water system as specified in Env-Dw 709.05(a).
- (e) If the owner of an NCS fails to submit a routine bacteria sample during an assigned month, the owner shall submit the sample as soon as the owner discovers the failure or upon notification by the department of the failure, whichever date comes first.
- (f) The owner of an NCS as described in (a)(1), above, that provides water to the public at least 3 calendar quarters of the year, may submit a written request to the department that the monitoring frequency

specified in (a)(1), above, be reduced to no less than twice per calendar year.

- (g) A request submitted pursuant to (f), above, shall contain the following information:
  - (1) The name of the NCS:
  - (2) The EPA identifier of the NCS; and
  - (3) The rationale for the reduction in monitoring frequency, based on the criteria in (h), below.
- (h) The department shall approve the request submitted pursuant to (f), above, if the department determines that:
  - (1) The NCS has had no presence of coliform contamination within the past 12 months;
  - (2) The NCS owner has submitted all required bacteria samples within the past 12 months;
  - (3) The most recent sanitary survey shows that the NCS is supplied solely by protected groundwater and is free of sanitary defects;
  - (4) The sanitary protective area for the NCS does not contain any structure, item, or activity that poses the risk of bacterial contamination; and
  - (5) The NCS has not continuously used a bacterial disinfection/inactivation treatment process in the previous 12 months.
- (i) The department shall notify the NCS owner in writing of its decision on the request to reduce the frequency of bacteria monitoring. If the request is denied, the notice shall specify the reason(s) for the denial.

## Env-Dw 709.08 Return to Standard Monitoring Frequency for NCS.

- (a) The owner of an NCS monitoring bacteria at a reduced frequency under Env-Dw 709.07(f) through (i) shall return to standard monitoring bacteria frequency if:
  - (1) The NCS has a confirmed presence of total coliform contamination;
  - (2) The NCS owner fails to submit 2 or more required routine bacteria samples within an 18 month period;
  - (3) A sanitary survey identifies a sanitary defect that has not been corrected within the time frame set forth pursuant to Env-Ws 306 or successor rules in Env-Dw 720;
  - (4) The sanitary protective area for the NCS contains a structure, item, or activity that poses the risk of bacterial contamination:
  - (5) The NCS owner has installed a continuously-operating bacterial disinfection/ inactivation treatment process within 6 months of incurring a bacterial MCL violation;
  - (6) A new source is added to the NCS; or
  - (7) The physical configuration of the NCS warrants additional monitoring to accurately determine water quality.
- (b) The department shall notify the NCS owner in writing if it determines that any of the criteria listed in (a), above, has been met and so the system has to return to monitoring bacteria at the standard frequency.

## Env-Dw 709.09 Bacteria Sampling Requirement When Turbidity Exceeds One NTU.

(a) The owner of a PWS using surface water or groundwater under the direct influence of surface

water, as defined in Env-Ws 302 or successor rules in Env-Dw 100, which is not subject to filtration pursuant to Env-Ws 380 or successor rules in Env-Dw 716, shall collect at least one sample near the first service connection each day the turbidity level of the source water, measured as specified in 40 CFR 141.22, exceeds one NTU.

- (b) The sample shall be analyzed for turbidity and for the presence of total coliforms.
- (c) When one or more turbidity measurements in any day exceed one NTU, the system owner shall collect a coliform sample within 24 hours of the first exceedance, unless the department determines that the system cannot have the sample analyzed within 30 hours of collection.
- (d) Sample results from this coliform monitoring shall be included in determining compliance with the MCL for total coliforms specified in Env-Dw 702.

## Env-Dw 709.10 Repeat Monitoring.

- (a) Subject to (b) and (c), below, if a routine sample is positive for total coliforms, fecal coliforms, or <u>E</u>. <u>coli</u>, the PWS owner shall collect a set of repeat samples as specified in (d) through (f), below, within 24 hours after being notified by the department of the positive result.
- (b) Additional repeat sampling shall not be required if any of the 5 additional routine samples required by Env-Dw 709.11 cause an MCL violation for total coliforms to occur for that month.
- (c) The department shall extend the 24-hour limit if the department determines that the PWS owner cannot collect the repeat samples within 24 hours or when the samples cannot be analyzed within 30 hours of being collected. In determining the amount of the time extension, the department shall evaluate the need to protect public health against the owner's inability to collect the samples within the 24-hour limit.
- (d) A PWS owner who collects more than one routine sample per month shall collect at least 3 repeat samples for each routine sample that is positive for total coliforms, fecal coliforms, or <u>E. coli</u>.
- (e) A PWS owner who collects one routine sample per month or less shall collect at least 4 repeat samples for each routine sample that is positive for total coliforms, fecal coliforms, or <u>E. coli</u>.
  - (f) The PWS owner shall collect one repeat sample from each of the following locations:
    - (1) The sampling tap where the original sample that was positive for total coliforms, fecal coliforms, or <u>E. coli</u> was collected;
    - (2) A tap within 5 service connections upstream of the original sampling site;
    - (3) A tap within 5 service connections downstream of the original sampling site; and
    - (4) If a fourth repeat sample is required pursuant to (e), above, at another distribution location chosen by the system owner or at the source.
- (g) The PWS owner may use the fourth repeat sample to meet the triggered monitoring requirements specified in Env-Dw 717, if applicable. If a fourth repeat sample is not required based on (d), above, the owner shall collect a source sample to meet the triggered monitoring requirements specified in Env-Dw 717, if applicable.
  - (h) The PWS owner shall collect all repeat samples on the same day.
- (i) In lieu of collecting repeat samples in accordance with (f) through (h), above, the owner of a PWS having a single service connection may:
  - (1) Collect the required set of repeat samples over a 4 day period, provided that the source sample(s) collected in accordance with the requirements of Env-Dw 717 and one repeat sample

from the single service connection are collected within 24 hours after being notified by the department of the positive result; or

- (2) Collect a larger volume repeat sample in one or more sample containers of any size, as long as the total volume collected is at least 400 ml.
- (j) Subject to (k), below, if one or more repeat samples in the set is positive for total coliforms, fecal coliforms, or <u>E. coli</u>, the PWS owner shall:
  - (1) Collect an additional set of repeat samples in the manner specified in (a) through (i), above;
  - (2) Repeat this process until either total coliforms are not detected in one complete set of repeat samples, or the PWS owner determines that the MCL(s) for total coliforms specified in Env-Dw 702 have been exceeded;
  - (3) Notify the department of the results of (2), above; and
  - (4) Collect the samples within 24 hours of being notified of the positive result unless the department extends the limit as provided in (e), above.
- (k) If the repeat sample(s) collected from the source is positive for <u>E. coli</u>, the PWS owner shall be subject to Env-Dw 717.
- (1) Except as provided in Env-Dw 709.11, the department shall not waive the requirement for a system owner to collect repeat samples as specified in (a) through (j), above.

## Env-Dw 709.11 Additional 5 Routine Sample Monitoring Requirements.

- (a) Subject to (c) through (f), below, if a PWS owner collecting less than 5 routine samples per month has one or more total coliform-positive samples and the department does not invalidate the sample result(s) under Env-Dw 709.12, the owner shall collect at least 5 routine samples at sites that are representative of water throughout the distribution system, including all of the sample site(s) listed in the sampling schedule, during the next month the PWS provides water to the public.
- (b) If any of the 5 additional routine samples required by (a), above, are positive for total coliforms, fecal coliforms, or <u>E. coli</u>, the triggered monitoring requirements specified in Env-Dw 717 shall not apply unless the PWS has only one service connection.
- (c) The department shall waive the requirement to collect 5 routine samples the next month the PWS provides water to the public if the department:
  - (1) Performs a site visit before the end of the next month that the PWS provides water to the public;
  - (2) Determines why the sample was positive for total coliforms, fecal coliforms, or <u>E. coli</u>; and
  - (3) Establishes that the PWS has corrected the problem or will correct the problem before the end of the next month the PWS provides water to the public.
- (d) Once a determination is made to waive the requirement to collect the 5 routine samples, the department shall:
  - (1) Document the waiver decision in writing, have it approved and signed by the director of the department's division of water, or designee, and make this document available to EPA and the public; and
  - (2) Describe the specific cause(s) of the positive total coliform, fecal coliform, or <u>E. coli</u> sample result(s) and what action(s) the PWS owner has taken and/or will take to correct the problem.

- (e) As a condition of receiving a waiver of the 5 routine sample monitoring requirement, the PWS owner shall:
  - (1) Not seek a waiver of the requirement to collect 5 routine samples the next month that the PWS provides water to the public solely on the grounds that all repeat samples are negative for total coliforms; and
  - (2) Continue to take at least one routine sample before the end of the next month the PWS provides water to the public and use it to determine compliance with the MCL for total or fecal coliforms specified in Env-Dw 702, unless the department has determined that the PWS owner has corrected the contamination problem before the set of repeat samples required by Env-Dw 709.10 was collected, and all repeat samples are negative for total coliforms and fecal coliforms.
- (f) Results of all routine and repeat samples not invalidated by the department shall be included in determining compliance with the MCL for total coliforms specified in Env-Dw 702.

# Env-Dw 709.12 <u>Invalidation of Total Coliform Samples</u>.

- (a) A sample result that is positive for total coliforms, fecal coliforms, or <u>E. coli</u> that is invalidated under this section shall not be used to meet the minimum monitoring requirements of this part.
- (b) The department shall invalidate a sample result that is positive for fecal coliforms or  $\underline{E}$ .  $\underline{coli}$  only if the laboratory establishes that improper sample analysis caused the positive result.
- (c) Subject to (d), below, the department shall invalidate a sample result that is positive for total coliforms only if:
  - (1) The laboratory establishes that improper sample analysis caused the positive result;
  - (2) The department, on the basis of the results of repeat samples collected as required by Env-Dw 709.10, determines that the positive sample resulted from a domestic or other non-distribution system plumbing problem, provided that all repeat samples collected at the same tap as the original positive sample are also positive for total coliforms, and all other repeat samples are negative for total coliforms; or
  - (3) The department has substantial grounds to believe that a positive total coliform result is due to a circumstance or condition which does not reflect water quality in the distribution system, provided the PWS owner collects all repeat samples required under Env-Dw 710.10 and uses them to determine compliance with the MCL for total coliforms, fecal coliforms, or <u>E</u>. <u>coli</u> specified in Env-Dw 702.
- (d) The department shall not invalidate a total coliform-positive sample result on the basis of repeat samples if:
  - (1) All of the repeat samples are total coliform-negative; or
  - (2) The PWS has only one service connection.
  - (e) If the department invalidates a total coliform sample result:
    - (1) The rationale for the decision shall be documented in writing and approved and signed by the director of the department's division of water, or designee;
    - (2) The written documentation shall state the specific cause of the positive sample, and what action(s) the PWS owner has taken or will take to correct the problem; and
    - (3) The department shall make the document available to the EPA and the public.

- (f) A laboratory shall invalidate a total coliform sample result where total coliforms are not detected if the sample:
  - (1) Produces turbid culture in the absence of gas production using an analytical method where gas formation is examined, such as the multiple-tube fermentation technique;
  - (2) Produces turbid culture in the absence of an acid reaction in the presence-absence coliform test; or
  - (3) Exhibits confluent growth or produces colonies too numerous to count with an analytical method using a membrane filter.
- (g) If a sample is invalidated for a reason specified in (b), (c), or (f), above, the PWS owner shall collect another sample from the same sampling point as the original sample within 24 hours of being notified of the sample invalidation, and have it analyzed for the presence of total coliforms.
- (h) The PWS owner shall continue to resample within 24 hours and have the samples analyzed until a valid result is obtained.
- (i) The department shall extend the 24-hour limit if the PWS owner has a logistical problem in collecting the sample within 24 hours that is beyond the owner's control.

## Env-Dw 709.13 Adjusting Bacteria Sampling Frequency After a Sanitary Survey.

- (a) The department shall review the results of each sanitary survey undertaken pursuant to Env-Ws 306 or successor rules in Env-Dw 720 with respect to bacterial contamination to determine:
  - (1) Whether the wellhead is physically inaccessible;
  - (2) Whether the wellhead is subject to flooding which cannot be corrected within the time limit specified in Env-Ws 306.02(e) or successor rules in Env-Dw 720; or
  - (3) If any other condition exists which would increase the potential for bacterial contamination.
- (b) The department shall increase the bacterial monitoring frequency of a PWS to monthly if the department determines that any of the conditions listed in (a), above, is present.
- (c) In conducting a sanitary survey of a system using groundwater, information on sources of contamination within the delineated wellhead protection area that was collected in the course of developing and implementing a wellhead protection program for the groundwater source shall be considered instead of collecting new information, if the information was collected since the last time the system was subject to a sanitary survey.

## Env-Dw 709.14 Follow-up Testing for Fecal Coliforms or E. coli; Boil Orders.

- (a) If any bacteria sample that is representative of water being supplied by a PWS to its customers is positive for total coliforms, the PWS owner shall analyze, or request the laboratory to analyze, the total coliform-positive culture medium for either fecal coliforms or E. coli.
  - (b) If fecal coliforms or <u>E</u>. <u>coli</u> are present, the PWS owner shall:
    - (1) Issue a boil order advising all consumers that the water should be vigorously boiled for not less than 2 minutes before human consumption; and
    - (2) Notify the department by the end of the work day in which the PWS owner is notified of the test result, unless the PWS owner is notified of the result after the department office is closed, in which case the PWS owner shall notify the department before noon on the next business day.

- (c) Boil order language shall:
  - (1) Clearly explain the need to boil water vigorously for a minimum of 2 minutes prior to using the water for any purpose associated with human or animal consumption, which includes but is not limited to drinking, brushing teeth, washing vegetables, food preparation, dishwashing, making infant formula, or making ice;
  - (2) Provide the name, title, and telephone number of the PWS contact who can address any questions or concerns; and
  - (3) State that further notification will be issued when the boil order has been lifted.
- (d) Notification to PWS consumers of the boil order shall be in accordance with the public notification requirements for acute violations as specified in Env-Ws 351 or successor rules in Env-Dw 800.
- (e) For all PWS, the PWS owner also shall post the boil order in a conspicuous place in areas frequented by the public, which shall include electronic postings such as on the home page of the internet site for the owner or PWS, if the owner or PWS has an internet site.
  - (f) The PWS owner shall not lift the boil order unless:
    - (1) A minimum of 2 consecutive sets of samples, collected at least 24 hours apart, show an absence of total coliforms, fecal coliforms, and <u>E</u>. <u>coli</u>, where a set of samples consists of the greater of 3 samples or the number of routine samples required by Env-Dw 709.05, to a maximum of 10 samples, at sampling points identified in consultation with the department;
    - (2) The department is satisfied that the PWS owner has undertaken all reasonable efforts to identify and correct the source of contamination, by conducting an inspection of the entire water system, including the source and all treatment, storage, and distribution facilities, and correcting all identified issues; and
    - (3) The department notifies the PWS owner that the boil order may be lifted.

## Env-Dw 709.15 Relief from Boil Order Requirements.

- (a) If fecal coliforms or  $\underline{E}$ .  $\underline{coli}$  are present only in specific, hydraulically-isolated segments of a PWS service area, a PWS owner may submit a written request to the department to approve a boil order that is limited to customers in the service areas that are directly affected.
- (b) The department shall approve a request submitted pursuant to (a), above, if it agrees with the PWS's assessment that the affected area is hydraulically isolated.
- (c) The owner of a PWS may submit a written request to the department to waive the requirement to issue a boil order if the PWS owner:
  - (1) Has submitted a minimum of 3 routine samples for bacteria analysis;
  - (2) Was notified that only one sample in the sampling set shows the presence of fecal coliforms or  $\underline{E}$ .  $\underline{coli}$ , and all other samples in the set show an absence of total coliforms;
  - (3) Concludes, based on an inspection performed by the system's primary certified operator immediately after being notified of the detection, that there are no apparent causes for the detection of fecal coliforms or <u>E. coli</u>;
  - (4) Has provided continuous treatment of all active water sources by addition of a chemical disinfectant during the 30 days prior to the samples that tested positive and has continuously maintained detectable disinfectant residuals at all times and locations for at least the prior 6 months, as verified by monitoring performed under Env-Ws 382.12 or successor rules in Env-Dw 715; and

- (5) Submits the written request to waive the boil order requirement within 4 hours of receiving notice from the department that a boil order is required.
- (d) The department shall waive the requirement to issue a boil order if it determines that all of the requirements specified in (c), above, have been met, subject to the following conditions:
  - (1) The PWS owner shall:
    - a. Take repeat samples as specified in Env-Dw 709.10 within 6 hours of being notified of the positive result; and
    - b. Submit the sample results showing the absence of total coliforms, fecal coliforms, and  $\underline{E}$ .  $\underline{coli}$  to the department within 24 hours of taking the samples; and
  - (2) The department shall inspect the PWS within 24 hours of initial notification, focusing on the effectiveness of the disinfection process and the circumstances of the samples that initially indicated the presence of fecal coliforms or <u>E</u>. <u>coli</u>.
- (e) The department shall require the PWS to issue a boil order within 12 hours of notification if the system fails to comply with the conditions specified in (d)(1), above, or the department's inspection pursuant to (d)(2), above, identifies a possible cause of the initial indication of fecal coliforms or  $\underline{E}$ . coli.

## Env-Dw 709.16 Sample Volume and Collection Protocol.

- (a) A standard sample volume of 100 ml shall be used for bacteria analysis, regardless of the analytical method used.
- (b) Bacteria samples shall be analyzed for the presence or absence of total coliforms, fecal coliforms, or E. coli.
  - (c) Bacteria samples may be analyzed for total coliform density.
- (d) Unless a PWS disinfects on a regular and continuous basis, chlorine or other disinfectants shall not be added to the PWS within one week prior to the time when bacterial test samples are scheduled to be collected. If disinfection is necessary to protect public health within one week of a bacterial test, such treatment shall be described on the sample identification form. Failure to report disinfection occurring within one week on the sample information form shall be considered as misrepresentation of the sample.
- Env-Dw 709.17 <u>Compliance Determinations</u>. Compliance shall be determined as specified in Env-Dw 705.01 and Env-Dw 709.01 through Env-Dw 709.18.

## Env-Dw 709.18 Bacteria Violations.

- (a) A standard MCL violation shall exist if:
  - (1) For a system for which fewer than 40 samples per month are collected, any 2 or more non-invalidated samples are positive for total coliforms; or
  - (2) For a system for which 40 or more samples per month are collected, more than 5.0% of the samples collected during a month are positive for total coliforms.
- (b) An acute MCL violation shall exist if:
  - (1) Any routine sample tests positive for total coliforms but negative for fecal coliforms or <u>E. coli</u> and is followed by any repeat sample which tests positive for fecal coliforms or <u>E. coli</u>; or
  - (2) Any routine sample tests positive for fecal coliforms or  $\underline{E}$ .  $\underline{coli}$  and any of the repeat samples test positive for total coliforms, fecal coliforms, or  $\underline{E}$ .  $\underline{coli}$ .

## Env-Dw 709.19 Response to Violation.

- (a) The owner of a PWS at which the MCL specified in Env-Dw 702 for total coliforms, fecal coliforms, or <u>E. coli</u> is exceeded shall:
  - (1) Report the violation to the department as soon as possible within 24 hours of receiving the results; and
  - (2) Notify the public in accordance with Env-Ws 351.01 through Env-Ws 355.01 or successor rules in Env-Dw 800.
- (b) A PWS owner who has failed to comply with a coliform monitoring requirement, including the sanitary survey requirement, shall:
  - (1) Report the monitoring violation to the department as soon as the owner learns of the violation; and
  - (2) Notify the public in accordance with Env-Ws 351.01 through Env-Ws 355.01 or successor rules in Env-Dw 800.

#### PART Env-Dw 710 MONITORING FOR RADIONUCLIDES

Env-Dw 710.01 <u>Purpose</u>. The purpose of this part is to establish procedures and criteria for the monitoring of radionuclides in drinking water.

## Env-Dw 710.02 Applicability.

- (a) The requirements of this part other than Env-Dw~710.05(c) shall apply to community water systems (CWS).
- (b) The requirements specified in Env-Dw 710.05(c) shall apply to non-transient non-community water systems.

## Env-Dw 710.03 Definitions.

- (a) "Alpha particle" means a positively charged atomic particle consisting of 2 neutrons and 2 protons.
- (b) "Analytical gross alpha" means total gross alpha activity as measured by the EPA approved methodologies, as specified in 40 CFR 141.25, and includes, but is not be limited to, alpha particles from radium-226, uranium, thorium, and polonium.
  - (c) "Beta particle" means an electron emitted from the nucleus of a radionuclide.
  - (d) "Compliance gross alpha" means the analytical gross alpha activity minus the uranium activity.
  - (e) "Radionuclides" means alpha particles, beta particles, or both.

## Env-Dw 710.04 Frequency and Sample Location for Radionuclides.

- (a) The owner of a CWS shall collect a minimum of one water sample at each sampling point specified in the sampling schedule established pursuant to Env-Dw 708.01, at the frequency specified in the sampling schedule.
- (b) The CWS owner shall collect each sample at the same sampling point unless the owner requests, and the department approves, an alternative sampling point pursuant to Env-Dw 708.04.
  - (c) If the CWS draws water from more than one source and the sources are combined before

distribution, the CWS owner shall sample the blended water, provided it meets the criteria established in Env-Dw 708.05.

Env-Dw 710.05 Radionuclide Monitoring Requirements for New Systems or Sources.

- (a) The owner of a new CWS or an existing CWS using a new source of supply shall collect and analyze:
  - (1) One sample for radon prior to using water from the new source; and
  - (2) Quarterly samples for compliance gross alpha, combined radium-226 and radium-228, and uranium as specified in the schedule established pursuant to Env-Dw 708.
  - (b) Initial monitoring shall:
    - (1) Begin within the first quarter that the new system or source first provides water to the system; and
    - (2) Be performed in accordance with Env-Dw 710.06.
- (c) The owner of a new non-transient, non-community water system or an existing non-transient, non-community water system using a new source of supply shall collect and analyze one sample for compliance gross alpha, combined radium-226 and radium-228, and uranium prior to using water from the new source.

## Env-Dw 710.06 <u>Initial Monitoring for Radionuclides</u>.

- (a) A CWS owner shall collect 4 consecutive quarterly samples for compliance gross alpha, combined radium-226 and radium-228, and uranium at all sampling points identified in the sampling schedule established pursuant to Env-Dw 708.01.
- (b) The samples required by (a), above, shall be taken in the quarters designated in the sampling schedule established pursuant to Env-Dw 708.01 during each compliance period.
- (c) If the results of the samples from the first 2 quarters are below the detection limits as specified in Env-Dw 710.18, the CWS owner may submit a written request to the department for the monitoring frequency to be reduced.
  - (d) A written request submitted pursuant to (c), above, shall contain the following:
    - (1) The name of the CWS;
    - (2) The EPA identifier for the CWS; and
    - (3) A summary of the historical radionuclide data from the system and nearby systems, when available.
- (e) Upon determination by the department that the results are all below the detection limits, as listed in Table 710-2, the final 2 quarters of the initial monitoring shall be dismissed and the monitoring frequency shall be as specified in Env-Dw 710.08.

Env-Dw 710.07 <u>Increased Monitoring for Radionuclides</u>. If the running annual average of the initial monitoring results for radionuclides at any sampling point is above the applicable MCL, the CWS owner shall collect and analyze quarterly samples at that sampling point.

## Env-Dw 710.08 Reduced Monitoring for Radionuclides.

(a) The monitoring frequency for radionuclides shall be based on the average of the results of the initial monitoring required pursuant to Env-Dw 710.06, as specified in Table 710-1 below:

Table 710-1
Monitoring Frequency Based on Radionuclide Concentrations

Compliance Gross Alpha (pCi/L)

Average Monitoring Result	Frequency
13.5 to 15	Yearly
7.6 to 13.4	Every 3 years
3 to 7.5	Every 6 years
less than 3	Every 9 years

# Radium 226 plus Radium-228 (pCi/L)

Average Monitoring Result	Frequency
4.5 to 5	Yearly
2.6 to 4.4	Every 3 years
1.0 to 2.5	Every 6 years
less than 1.0	Every 9 years

#### Uranium (µg/L)

Average Monitoring Result	Frequency
27 to 30	Yearly
15.5 to 26.5	Every 3 years
1 to 15.4	Every 6 years
less than 1	Every 9 years

- (b) Subsequent sample results shall be used to establish future sampling schedules using the frequencies in Table 710-1.
- (c) Based on review of the submitted results, the department shall modify the system's schedule in accordance with Table 710-1 and notify the CWS owner in writing of the new monitoring requirements.

Env-Dw 710.09 <u>Monitoring and Compliance Requirements for Beta Particle and Photon Radioactivity for Vulnerable Systems</u>. To determine compliance with the MCLs in Env-Dw 703.03 for beta particle and photon radioactivity, the CWS owner shall comply with 40 CFR 141.26(b).

## Env-Dw 710.10 Compliance Determinations for Radionuclides.

- (a) The department shall determine compliance with Env-Dw 703 based on the analytical results obtained at each sampling point.
- (b) For a CWS at which the required monitoring is annual or less frequently, if the result of a sample from one sampling point exceeds an MCL, the CWS owner shall collect a confirmation sample within 14 days.
  - (c) The confirmation sample shall:
    - (1) Be a new sample collected under the same contributing conditions and at the same sampling point as the original sample; and
    - (2) Be analyzed within 45 days of collection.
- (d) Subject to (k), below, the results of the confirmation sample shall be averaged with the initial sample results and the average shall be used to determine compliance.
  - (e) If the average exceeds the MCL, the CWS shall be deemed in violation of the MCL.
  - (f) To determine compliance with the MCLs listed in Env-Dw 703, averages of data shall be used,

rounded to the same number of significant figures as the MCL for the substance in question.

- (g) For a CWS at which the required monitoring is more frequent than once per year, the department shall determine compliance with the MCL based on a running annual average at each sampling point, as follows:
  - (1) If the running annual average of the sample results at any sampling point is greater than the MCL, then the CWS shall be deemed out of compliance with the MCL; and
  - (2) If any sample result is more than 4 times the MCL at any sample point, the CWS shall be deemed out of compliance with the MCL immediately.
- (h) The CWS owner shall include the results of all samples taken and analyzed to determine compliance, even if that number is greater than the minimum required.
- (i) If a sample result is less than the detection limit, the result shall be deemed to be zero for purposes of calculating the running annual average.
- (j) If the MCL for the radionuclides set forth in Env-Dw 703 is exceeded, the CWS owner shall notify:
  - (1) The department, pursuant to Env-Dw 710.15; and
  - (2) The public, as required by Env-Ws 351.04 or successor rule in Env-Dw 800.
- (k) If results from the sampling point or the contributing sources have historically demonstrated the presence of the radionuclide, then:
  - (1) A confirmation sample shall not be required; and
  - (2) The monitoring frequency for the approved sampling point shall be increased to quarterly for that contaminant.

## Env-Dw 710.11 System Reporting and Recordkeeping.

- (a) A CWS owner shall report the monitoring results for radionuclides to the department within the first 10 days following the month in which the results are received.
- (b) Any CWS owner who fails to report monitoring results to the department within the first 10 days following the month in which the results are received shall notify the public as required by Env-Ws 351.04 or successor rule in subtitle Env-Dw.
- (c) The CWS owner shall submit the monitoring results in the same unit of measurement and number of significant figures in which the MCL is expressed, as set forth in Table 703-2.

## Env-Dw 710.12 Sample Collection Protocol and Laboratory Analytical Methods.

(a) The sampling protocol for alpha and beta radionuclides shall be those set forth in Table 710-1, below, subject to the notes in (b), below:

Table 710-1
Sample Collection Protocol for Radionuclides

Contaminant	Preservative A	Container B	Maximum Holding Time <sup>C</sup>
Alpha radionuclides	$HNO_3$	P or G	6 months
Beta radionuclides	$HNO_3$	P or G	6 months

(b) The following notes shall apply to Table 710-1:

- (1) "A" means that:
  - a. If nitric acid (HNO<sub>3</sub>) cannot be used because of shipping restrictions, the sample shall be preserved initially by icing and immediately shipped to the laboratory;
  - b. Upon receipt in the laboratory, the sample shall be acidified with concentrated HNO<sub>3</sub> to pH less than 2; and
  - c. At time of analysis, the sample container shall be thoroughly rinsed with 1:1 HNO<sub>3</sub> with the washings being added to the test sample;
- (2) "B" means that the sample container shall:
  - a. Be made of hard or soft plastic, where the letter "P" means plastic; or
  - b. Be made of glass, where the letter "G" means glass; and
- (3) "C" means that in all cases, samples shall be analyzed as soon after collection as possible.
- (c) Analysis for radionuclides shall be conducted by a laboratory accredited for radionuclides pursuant to Env-C 300.
  - (d) Laboratory detection limits for radionuclides shall be those set forth in Table 710-2, below:

Table 710-2 Detection Limits for Radionuclides

Contaminant	<u>Detection Limit</u>
Analytical Gross Alpha	3 pCi/L
Cesium-134	10 pCi/L
Compliance Gross Alpha	3 pCi/L
Gross Beta	4 pCi/L
Iodine-131	1 pCi/L
Radium-226	1 pCi/L
Radium-228	1 pCi/L
Strontium-89	10 pCi/L
Strontium-90	2 pCi/L
Tritium	1,000 pCi/L
Uranium	1 μg/L
Other radionuclides	1/10 of the applicable limit

#### PART Env-Dw 711 MONITORING FOR INORGANIC CHEMICALS

Env-Dw 711.01 Applicability.

- (a) The owner of a community water system (CWS) or non-transient, non-community water system (NTNC) shall conduct monitoring to determine compliance with the MCLs for inorganics specified in Env-Dw 704.02.
- (b) The owner of a transient, non-community water system shall conduct monitoring to determine compliance with the nitrate and nitrite MCLs specified in Env-Dw 704.02, in accordance with Env-Dw 711.18 through Env-Dw 711.29.

#### Env-Dw 711.02 Monitoring Location for Regulated Inorganics for Groundwater Systems.

- (a) The sampling point for a PWS using groundwater (groundwater system) shall be at each entry point to the distribution system, so as to be representative of each well after treatment.
- (b) The owner of a groundwater system shall collect each sample at the same sampling point. If the owner believes that conditions make another sampling point more representative of each source or treatment plant, the owner shall request a change in sampling point pursuant to Env-Dw 708.10.

## Env-Dw 711.03 Monitoring Location for Regulated Inorganics for Other Systems.

- (a) The owner of a PWS using surface water or a combination of surface water and groundwater shall take a minimum of one sample at each sampling point specified in the sampling schedule established pursuant to Env-Dw 708.01.
- (b) The sampling points specified in the schedule shall include every entry point to the distribution system:
  - (1) After any application of treatment; or
  - (2) In the distribution system at a point which is representative of each source after treatment.
- (c) The owner of a system specified in (a), above, shall collect each sample at the same sampling point. If the owner believes that conditions make another sampling point more representative of each source or treatment plant, the owner shall request a change in the sampling point pursuant to Env-Dw 708.04.

# Env-Dw 711.04 Frequency of Monitoring for Regulated Inorganics.

- (a) The owner of a groundwater system shall collect one sample at each sample point during each 3-year compliance period.
- (b) The owner of a surface water system, or combined surface/groundwater system, shall collect one sample at each sample point annually.
- (c) The frequency of monitoring for asbestos shall be as specified in Env-Dw 711.09 through Env-Dw 711.17.
- (d) The frequency of monitoring for nitrate and nitrite shall be as specified in Env-Dw 711.18 through Env-Dw 711.26.
- (e) The department shall waive the requirement to monitor for cyanide if the department determines that the PWS is not vulnerable to cyanide due to a lack of any industrial source(s) within the wellhead contributing area.

# Env-Dw 711.05 <u>Sampling Requirements When Concentrations of Regulated Inorganics are Greater Than or Equal To 50% of the MCL.</u>

- (a) Subject to (k), below, if the concentration of any regulated inorganic in a representative sample is greater than or equal to 50% of the applicable MCL listed in Env-Dw 704, the PWS owner shall collect a confirmation sample as specified in (b), below.
  - (b) The confirmation sample shall be:
    - (1) A new sample collected under the same contributing conditions and at the same sampling point as the original sample; and
    - (2) Collected within 14 days of the original sample and analyzed for the regulated inorganic(s) that triggered the requirement to collect the confirmation sample.

- (c) The results of the confirmation sample shall be averaged with the initial sample results and the average shall be used to determine compliance with the MCL specified in Env-Dw 704.
- (d) If the average is less than 50% of the MCL listed in Env-Dw 704, the monitoring requirements for that sampling point shall be as specified in Env-Dw 711.04.
- (e) If the average is equal to or greater than 50% of the MCL, the monitoring frequency for that sampling point for that contaminant shall be revised to quarterly beginning in the next quarter.
- (f) The revised monitoring schedule for each source pursuant to (e), above, shall continue until the concentration of the particular regulated inorganic is determined by the department to be reliably and consistently below the MCL as defined in Env-Ws 302 or successor rules in Env-Dw 100.
- (g) After a minimum of one year of quarterly sampling, the PWS owner may submit in writing a request to the department for the monitoring frequency to be reduced.
  - (h) The written request shall include:
    - (1) The name of the PWS;
    - (2) The EPA identifier for the PWS;
    - (3) A summary of all quarterly sampling results and results of any additional sampling undertaken by the owner; and
    - (4) An explanation of whether the PWS is operating any type of treatment to reduce the amount of regulated inorganics.
- (i) The department shall reinstate the monitoring frequency specified in Env-Dw 711.04 upon determining that:
  - (1) Based on 4 consecutive quarterly samples, the concentration of the regulated inorganic is reliably and consistently below the MCL; and
  - (2) The PWS is not operating any type of treatment to reduce the amount of the regulated inorganics.
- (j) If the monitoring frequency is reduced pursuant to (i), above, subsequent samples shall be collected during the quarter(s) which previously resulted in the highest analytical result.
- (k) If results from the sampling point or the contributing sources have historically demonstrated the presence of regulated inorganics, then:
  - (1) A confirmation sample shall not be required; and
  - (2) The monitoring frequency for the approved sampling point shall be increased to quarterly for that contaminant.

## Env-Dw 711.06 Sample Collection Protocol for Regulated Inorganics.

(a) A system owner shall conduct sample collection for the regulated inorganics listed in Env-Dw 704 using the sample preservation, container, and maximum holding time procedures specified in Table 711-1 below, subject to the notes specified in (b), below:

# Table 711-1 Sample Collection Protocol for Regulated Inorganics

Containment Preservative Container iviaximum Holding Time	Contaminant	Preservative A	Container B	Maximum Holding Time <sup>C</sup>
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Antimony	Conc HNO <sub>3</sub> to pH <2	P or G	6 months
Arsenic	Conc HNO <sub>3</sub> to pH <2	P or G	6 months
Barium	Conc HNO <sub>3</sub> to pH <2	P or G	6 months
Beryllium	Conc HNO <sub>3</sub> to pH <2	P or G	6 months
Cadmium	Conc HNO <sub>3</sub> to pH <2	P or G	6 months
Chromium	Conc HNO <sub>3</sub> to pH <2	P or G	6 months
Cyanide	Cool 4°C, NaOH pH >12	P or G	14 days
Fluoride	None	P or G	1 month
Mercury	Conc HNO <sub>3</sub> to pH <2	P or G	28 days
Nickel	Conc $HNO_3$ to $pH < 2$	P or G	6 months
Selenium	Conc HNO <sub>3</sub> to pH <2	P or G	6 months
Thallium	Conc HNO <sub>3</sub> to pH <2	P or G	6 months

- (b) The following notes shall apply to Table 711-1:
  - (1) "A" means that:
    - a. If nitric acid (HNO<sub>3</sub>) cannot be used because of shipping restrictions, the sample shall be initially preserved by icing and immediately shipped to the laboratory;
    - b. Upon receipt in the laboratory, the sample shall be acidified with concentrated  $HNO_3$  to pH less than 2; and
    - c. At time of analysis, the sample container shall be thoroughly rinsed with 1:1 HNO<sub>3</sub>. The washings shall be added to the test sample;
  - (2) "B" means that the container shall:
    - a. Be made of plastic, where the letter "P" means plastic, hard or soft; or
    - b. Be made of glass, where the letter "G" means glass.
  - (3) "C" means that in all cases, samples shall be analyzed as soon after collection as possible.

## Env-Dw 711.07 Compliance Determination for Regulated Inorganics.

- (a) For a system at which regulated inorganics are monitored at a frequency greater than annually, the department shall determine compliance with the MCL specified in Env-Dw 704 by a running annual average, as defined in Env-Ws 302 or successor rules in Env-Dw 100, at each sampling point.
- (b) If the department determines that the running annual average at any sampling point is greater then the MCL as specified in Env-Dw 704, then the system shall be deemed out of compliance.
- (c) If any one sample is more than 4 times the MCL specified in Env-Dw 704, then the system shall be out of compliance.
- (d) Any sample result which is below the detection limit shall be calculated as zero for the purpose of determining the running annual average.
- (e) If a system is monitoring annually or less frequently, the system shall be deemed out of compliance with the MCLs if the level of a regulated inorganic at any sampling point is greater than the MCL. If confirmation samples are required by Env-Dw 711.05, the determination of compliance shall be based on the average of the initial and confirmation samples.
- (f) If a PWS has a distribution system with portions that are hydraulically separate from other parts of the distribution system, then:

- (1) Only that part of the system in which the MCL specified in Env-Dw 704 is exceeded shall be out of compliance; and
- (2) The PWS owner may request approval from the department pursuant to Env-Ws 351.06 or successor rule in Env-Dw 801 to limit the public notice to the users of only that portion of the system which is out of compliance.
- Env-Dw 711.08 <u>Reporting for Regulated Inorganics</u>. A PWS owner shall report regulated inorganics in accordance with Env-Dw 719.01.
- Env-Dw 711.09 <u>Monitoring for Asbestos</u>. Asbestos monitoring shall be in accordance with Env-Dw 711.11 through Env-Dw 711.17, unless a waiver is obtained pursuant to Env-Dw 711.10.

## Env-Dw 711.10 Waiver of Monitoring for Asbestos.

- (a) A PWS owner may request a waiver of asbestos monitoring as specified in (b), below, if the owner believes the PWS is not vulnerable to asbestos contamination.
- (b) To request a waiver, the owner shall submit to the department a written request containing the following information:
  - (1) The name of the PWS:
  - (2) The EPA identifier for the PWS; and
  - (3) An explanation of why a waiver is warranted, based on the factors specified in (c), below, with documentation and data to support the explanation, as appropriate to the factor.
  - (c) A PWS shall be deemed vulnerable to asbestos contamination if the PWS:
    - (1) Has a water source that is at risk for asbestos contamination, for instance due to proximity to an asbestos disposal site or other source of asbestos; or
    - (2) Uses asbestos-cement pipe for finished water distribution and the water is corrosive.
- (d) The department shall grant a waiver to a PWS if the department determines that the PWS is not vulnerable to asbestos.
- (e) A waiver shall remain in effect for the remainder of the 3-year compliance period. At the end of the compliance period, the PWS owner may request another waiver.
- Env-Dw 711.11 <u>Duration and Frequency of Routine Monitoring for Asbestos</u>. The owner of each community water system and non-transient, non-community water system shall monitor once for asbestos during the 3-year compliance period that it begins operation and every 9 years thereafter.

## Env-Dw 711.12 Monitoring Location for Asbestos.

- (a) The owner of a PWS that is vulnerable to asbestos contamination due solely to corrosion of asbestos-cement pipe shall collect one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely to occur.
- (b) The owner of a PWS that is vulnerable to asbestos contamination due solely to the potential for source water contamination shall monitor as for general regulated inorganics in accordance with Env-Dw 711.01 through Env-Dw 711.08.
- (c) The owner of a PWS that is vulnerable to asbestos contamination both to corrosion of asbestos-cement pipe and the potential for source water contamination shall collect one sample at a tap served by asbestos-cement pipe under conditions where asbestos contamination is most likely to occur.

(d) The department shall establish the sampling point in the sampling schedule established pursuant to Env-Dw 708.01 after conferring with the PWS owner relative to appropriate factors such as the amount of asbestos cement pipe and the age of the pipe.

## Env-Dw 711.13 Monitoring When the MCL for Asbestos is Exceeded.

- (a) The owner of a PWS which exceeds the MCL specified in Env-Dw 704 shall monitor for asbestos quarterly beginning in the next calendar quarter after the initial violation occurred.
- (b) The PWS owner may submit to the department a written request to reduce the asbestos monitoring frequency after:
  - (1) A minimum of one year of quarterly sampling for surface water systems; and
  - (2) A minimum of 2 quarters of sampling for groundwater systems.
  - (c) A request submitted pursuant to (b), above, shall include:
    - (1) The name of the PWS;
    - (2) The EPA identifier for the PWS;
    - (3) A summary of all quarterly sampling results; and
    - (4) An explanation of whether the PWS is operating any type of treatment to reduce the amount of asbestos.
- (d) The department shall decrease the quarterly monitoring requirement to the frequency specified in Env-Dw 711.11 only if the department determines that:
  - (1) The PWS is not operating any type of treatment to reduce the amount of asbestos; and
  - (2) The amount of asbestos in the water being delivered to persons served by the system is reliably and consistently below the MCL as defined in Env-Ws 302 or successor rules in Env-Dw 100.

## Env-Dw 711.14 Confirmation Sampling for Asbestos.

- (a) Where the results of sampling for asbestos indicate that the concentration of asbestos is greater than or equal to 50% of the MCL, the PWS owner shall:
  - (1) Collect a confirmation sample within 14 days after the initial sample was collected at the same sampling point and under the same contributing conditions; and
  - (2) Have the sample analyzed within 48 hours of collection, as required by 40 CFR 141.23(k)(2).
- (b) Where confirmation samples are taken, compliance shall be determined based on the average of the 2 samples.

#### Env-Dw 711.15 Collection Protocol for Asbestos.

(a) Samples to be analyzed for asbestos shall be collected in accordance with the protocol listed in Table 711-2, subject to the notes specified in (b), below:

# Table 711-2 Sample Protocol for Asbestos

Contaminant	Preservative A	Container B	Maximum holding time <sup>C</sup>

Asbestos	Cool to 4°C	P or G	2 days

- (b) The following notes shall apply to Table 711-2:
  - (1) "A" means that:
    - a. If nitric acid (HNO<sub>3</sub>) cannot be used because of shipping restrictions, the sample shall be preserved initially by icing and immediately shipped to the laboratory;
    - b. Upon receipt in the laboratory, the sample shall be acidified with concentrated  $HNO_3$  to pH less than 2; and
    - c. At time of analysis, the sample container shall be thoroughly rinsed with 1:1 HNO<sub>3</sub> with the washings being added to the test sample;
  - (2) "B" means that the sample container shall:
    - a. Be made of hard or soft plastic, where the letter "P" means plastic; or
    - b. Be made of glass, where the letter "G" means glass; and
  - (3) "C" means that in all cases, samples shall be analyzed as soon after collection as possible.

Env-Dw 711.16 Reporting for Asbestos. A PWS owner shall report for asbestos in accordance with Env-Dw 719.01.

#### Env-Dw 711.17 Compliance for Asbestos.

- (a) Compliance determination for asbestos shall be made using the analytical monitoring results obtained at each sampling point.
- (b) For systems conducting monitoring at a frequency greater than annually, the department shall determine compliance with the MCL for asbestos by analyzing a running annual average at each sampling point.
- (c) If the average at any sample point is greater than the MCL, then the system shall be out of compliance.
- (d) If any one sample in (c), above, would cause the running annual average to exceed the MCL, the system shall be out of compliance.
- (e) For a system monitoring annually or less frequently, the system shall be out of compliance with the MCL for asbestos if the level of a contaminant at any sampling point is greater than the MCL. If confirmation samples are required by Env-Dw 711.14, the determination of compliance shall be based on the average of the initial and confirmation samples.
- Env-Dw 711.18 <u>Monitoring for Nitrate</u>. The owner of a community water system, non-transient non-community water system, or transient non-community water system shall:
- (a) Monitor as specified in Env-Dw 711.19 through Env-Dw 711.22 to determine compliance with the MCL for nitrate specified in Env-Dw 704; and
  - (b) Report for nitrate as specified in Env-Dw 711.23.

#### Env-Dw 711.19 Frequency of Monitoring for Nitrate; Confirmation Samples.

- (a) The owner of a community water system, non-transient non-community water system, or transient non-community water system served by groundwater shall monitor annually for nitrate.
  - (b) The owner of a community water system, non-transient non-community water system, or

transient non-community water system served by surface water shall monitor for nitrate quarterly for the initial 4 quarters of operation and annually thereafter, subject to (h), below, and Env-Dw 711.20.

- (c) Subject to (d) below, if nitrate sampling results indicate an exceedance of the MCL and the system has no previous detections for nitrate, the system owner shall collect a confirmation sample within 24 hours of the system's receipt of notification of the analytical results of the first sample.
  - (d) A system owner unable to comply with the 24-hour sampling requirement shall:
    - (1) Immediately notify the consumers served by the system in accordance with Env-Ws 351 through Env-Ws 354 and appropriate portion of Env-Ws 356.01 or successor rules in Env-Dw 800: and
    - (2) Collect and analyze a confirmation sample within 7 days of notification of the analytical results of the first sample.
- (e) If nitrate sampling results indicate an exceedance of the MCL and the system has previous detections for nitrate, no confirmation sample shall be necessary.
- (f) Subject to (h), below, if nitrate results are 50% to 100% of the MCL the system owner shall collect a confirmation sample within 7 days.
- (g) If a confirmation sample is required pursuant to (c) or (f), above, the results of the initial and confirmation samples shall be averaged to determine compliance.
- (h) If results from the sampling point or the contributing sources have historically demonstrated the presence of nitrate, then:
  - (1) A confirmation sample shall not be required; and
  - (2) The monitoring frequency for the approved sampling point shall be increased to quarterly for that contaminant.

# Env-Dw 711.20 Revised Monitoring for Nitrate.

- (a) The owner of a community water system, non-transient non-community water system, or transient non-community water system using groundwater shall monitor for nitrate quarterly for at least one year following any one sample in which the concentration is greater than or equal to 50% of the nitrate MCL.
- (b) After a minimum of one year of quarterly sampling, the system owner may submit a written request to the department for the monitoring frequency to be reduced.
  - (c) The written request shall include:
    - (1) The name of the PWS:
    - (2) The EPA identifier for the PWS;
    - (3) A summary of all quarterly sampling results; and
    - (4) An explanation of whether the PWS is operating any type of treatment to reduce the amount of nitrate.
- (d) The department shall approve a reduction in monitoring from quarterly to annually if the department determines that:
  - (1) Based on 4 consecutive quarterly samples, the nitrate levels are reliably and consistently below the nitrate MCL; and
  - (2) The PWS is not operating any type of treatment to reduce the amount of nitrate.

- (e) A surface water system shall return to quarterly monitoring if any one sample is greater than or equal to 50% of the nitrate MCL.
- (f) After the initial round of quarterly sampling is completed, each community water system, non-transient non-community water system, and transient non-community system shall collect subsequent annual samples during the quarter in which the highest analytical result was obtained.

Env-Dw 711.21 <u>General System Evaluation Nitrate Samples</u>. Any nitrate sample collected in addition to the routine, make-up or confirmation samples for a PWS shall be used to determine compliance if the sample:

- (a) Is representative of water being supplied to consumers; and
- (b) Exceeds the MCL for nitrate as specified in Env-Dw 704.02.

Env-Dw 711.22 Collection Protocol for Nitrate.

(a) Collection protocol requirements for nitrate samples shall be as shown in Table 711-3, below, subject to the notes specified in (b), below:

Table 711-3
Sample Protocol for Nitrate

Contaminant	Preservative A	Container B	Maximum holding time <sup>C</sup>
Nitrate:			
Chlorinated	Cool to 4 °C	P or G	28 days
Non-chlorinated	Conc to pH < 2	P or G	14 days

- (b) The following notes shall apply to Table 711-3:
  - (1) "A" means that:
    - a. If nitric acid (HNO<sub>3</sub>) cannot be used because of shipping restrictions, the sample shall be preserved initially by icing and immediately shipped to the laboratory;
    - b. Upon receipt in the laboratory, the sample shall be acidified with concentrated HNO<sub>3</sub> to pH less than 2; and
    - c. At time of analysis, the sample container shall be thoroughly rinsed with 1:1 HNO<sub>3</sub> with the washings being added to the test sample;
  - (2) "B" means that the sample container shall:
    - a. Be made of hard or soft plastic, where the letter "P" means plastic; or
    - b. Be made of glass, where the letter "G" means glass; and
  - (3) "C" means that in all cases, samples shall be analyzed as soon after collection as possible.

Env-Dw 711.23 <u>Reporting and Compliance for Nitrate</u>. A system owner shall report for nitrates in accordance with Env-Dw 719.01.

Env-Dw 711.24 <u>Monitoring for Nitrite</u>. The owner of a community water system, non-transient non-community water system, or transient non-community water system shall:

- (a) Monitor for nitrite in accordance with Env-Dw 711.25 through Env-Dw 711.28; and
- (b) Report for nitrite in accordance with Env-Dw 711.29.

#### Env-Dw 711.25 Frequency of Monitoring for Nitrite; Confirmation Samples.

- (a) The PWS owner shall initially monitor for nitrite once in each 3 year compliance period to determine compliance with the MCL for nitrite in Env-Dw 704.
- (b) Subject to (c), below, if nitrite sampling results indicate an exceedance of the MCL and the PWS has no previous detections for nitrite, the PWS owner shall take a confirmation sample within 24 hours of receipt of notification of the analytical results of the first sample.
  - (c) A PWS owner unable to comply with the 24 hour sampling requirement shall:
    - (1) Immediately notify the persons served by the system in accordance with Env-Ws 351 through Env-Ws 354 and the appropriate portion of Env-Ws 356.01 or successor rules in Env-Dw 800; and
    - (2) Collect and analyze a confirmation sample within 7 days of notification of the analytical results of the first sample.
- (d) If the nitrite sampling results indicate an exceedance of the MCL and the system has previous detections for nitrite, no confirmation sample shall be necessary.
- (e) Subject to (g), below if nitrite results are 50% to 100% of the MCL, the system owner shall collect a confirmation sample within 7 days.
- (f) If a confirmation sample is required pursuant to (b) or (e), above, the results of the initial and confirmation samples shall be averaged in determining compliance.
- (g) If results from the sampling point or the contributing sources have historically demonstrated the presence of nitrite, then:
  - (1) A confirmation sample shall not be required; and
  - (2) The monitoring frequency for the approved sampling point shall be increased to quarterly for that contaminant.

#### Env-Dw 711.26 Continued and Revised Monitoring for Nitrite.

- (a) After the initial sample, a PWS for which the analytical result for nitrite is less than 50% of the MCL shall monitor for nitrite annually.
- (b) The owner of a community water system, non-transient non-community water system, or transient non-community water system shall monitor for nitrite quarterly for at least one year following any one sample in which the concentration of nitrite is equal to or greater than 50% of the MCL.
- (c) After a minimum of one year of quarterly sampling, the PWS owner may submit a written request to the department that the monitoring frequency be reduced.
  - (d) The written request shall include:
    - (1) The name of the PWS;
    - (2) The EPA identifier for the PWS;
    - (3) A summary of all quarterly sampling results; and
    - (4) Confirmation that the PWS is not operating any type of treatment to reduce the amount of nitrite.
- (e) The department shall approve a reduction in monitoring from quarterly to annually if the department determines that:

- (1) Based on 4 consecutive quarterly samples, the nitrite levels are reliably and consistently less than the nitrite MCL; and
- (2) The PWS is not operating any type of treatment to reduce the amount of nitrite.
- (f) A PWS owner who monitors annually shall collect each subsequent sample during the quarter(s) which previously resulted in the highest analytical results.

Env-Dw 711.27 <u>General System Evaluation Nitrite Samples</u>. Any nitrite sample collected in addition to the routine, make-up or confirmation samples for a PWS shall be used to determine compliance if the sample:

- (a) Is representative of water being supplied to consumers; and
- (b) Exceeds the MCL for nitrite as specified in Env-Dw 704.02.

Env-Dw 711.28 Collection Protocol for Nitrite.

(a) Collection protocol requirements for nitrite samples shall be as shown in Table 711-4 below, subject to the notes specified in (b), below:

Table 711-4
Sample Protocol for Nitrite

Contaminant	Preservative A	Container B	Maximum holding time <sup>C</sup>
Nitrite	Cool to 4 °C	P or G	48 hours

- (b) The following notes shall apply to Table 711-4:
  - (1) "A" means that:
    - a. If nitric acid (HNO<sub>3</sub>) cannot be used because of shipping restrictions, the sample shall be preserved initially by icing and immediately shipped to the laboratory;
    - b. Upon receipt in the laboratory, the sample shall be acidified with concentrated HNO<sub>3</sub> to pH less than 2; and
    - c. At time of analysis, the sample container shall be thoroughly rinsed with 1:1 HNO<sub>3</sub> with the washings being added to the test sample;
  - (2) "B" means that the sample container shall:
    - a. Be made of hard or soft plastic, where the letter "P" means plastic; or
    - b. Be made of glass, where the letter "G" means glass; and
  - (3) "C" means that in all cases, samples shall be analyzed as soon after collection as possible.

Env-Dw 711.29 <u>Reporting and Compliance for Nitrite</u>. The reporting requirements for nitrite shall be those specified in Env-Dw 719.01.

# PART Env-Dw 712 MONITORING FOR ORGANICS

## Env-Dw 712.01 Monitoring Frequency for VOC Contaminants.

- (a) The owner of a community water system or non-transient, non-community water system shall initially monitor for the health-related regulated volatile organic chemical (VOC) contaminants listed in Env-Dw 705.01 on a quarterly basis for one year.
  - (b) If no contaminant listed in Env-Dw 705.01 is detected at a PWS during the first year, the owner

shall thereafter monitor annually.

- (c) If one or more contaminants monitored pursuant to (a), above, is detected during the first year, the owner shall continue to monitor quarterly, subject to (d), below, and Env-Dw 712.04.
- (d) If the monitoring conducted during the first year reveals variations in the source(s) or within the system, the owner shall increase the monitoring frequency to the frequency that is necessary to accurately identify consumer exposure to the contaminants listed in Env-Dw 705.01.

## Env-Dw 712.02 Monitoring Location for VOC Contaminants.

- (a) The owner of a groundwater system shall collect at least one sample at every entry point to the distribution system, which entry point shall be representative of each well after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.
- (b) The owner of a system supplied by surface water or a combination of surface water and groundwater shall collect at least one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.
- (c) If the owner believes that conditions make another sampling point more representative of a source, treatment plant, or distribution system, the owner shall request a change in sampling location pursuant to Env-Dw 708.04.
- (d) If a system obtains water from more than one source and the sources are combined prior to entering the distribution system, the system owner shall collect the samples at an entry point to the distribution system during periods of normal operating conditions, when water from all sources is being used.

#### Env-Dw 712.03 Confirmation Sampling for VOC Contaminants.

- (a) If a VOC contaminant is detected in a representative sample at a level greater than or equal to the detection limit of 0.0005 mg/L, the PWS owner shall:
  - (1) Collect a confirmation sample under the same contributing conditions within 14 days of being notified of the result; and
  - (2) Have the sample analyzed for the contaminant(s) detected.
- (b) If the concentration of the VOC contaminant in the confirmation sample is greater than or equal to the detection limit of 0.0005 mg/L, the monitoring requirement for those sources shall be that stated in Env-Dw 712.04.
- (c) If the concentration of the VOC contaminant in the confirmation sample is below the detection limit, the monitoring requirements for those sources shall be that stated in Env-Dw 712.01.

# Env-Dw 712.04 Revised Monitoring Frequency for VOC Contaminants.

- (a) If a VOC contaminant is detected in the confirmation sample at a level greater than or equal to the detection limit of 0.0005 mg/L, the sampling frequency for the representative sampling site shall be revised to quarterly.
- (b) The revised monitoring schedule pursuant to (a), above, shall continue until the concentration of the contaminant is reliably and consistently below the MCL at each sampling point.
- (c) After a minimum of one year of quarterly sampling pursuant to (b), above, the PWS owner may submit a written request to the department in accordance with (d), below, for the monitoring frequency to be

reduced.

- (d) The written request to reduce the VOC monitoring frequency shall contain the following:
  - (1) The name of the PWS;
  - (2) The EPA identifier for the PWS;
  - (3) A summary of all quarterly sampling results; and
  - (4) Whether any type of treatment to reduce VOC contaminants has been or is being used by the PWS.
- (e) The department shall reinstate annual monitoring for VOC contaminants in response to a request submitted pursuant to (d), above, upon determining that:
  - (1) Based on 4 consecutive quarterly samples, the level of VOC contaminant(s) previously detected is reliably and consistently below the MCL; and
  - (2) The PWS is not operating any type of treatment to reduce the amount of VOC contaminants.
- (f) The owner of a PWS at which VOC contaminants are monitored annually shall monitor during the quarter which previously yielded the highest analytical result.
- (g) A PWS at which no VOC contaminants are detected in 3 consecutive annual samples may apply to the department for a waiver as specified in Env-Dw 712.19.

## Env-Dw 712.05 Monitoring for Vinyl Chloride.

- (a) Subject to (e), below, the owner of a community water system or non-transient non-community water system shall monitor quarterly for vinyl chloride if any of the following 2-carbon organic compounds is initially detected and subsequently confirmed in the water supply:
  - (1) Trichloroethylene;
  - (2) Tetrachloroethylene;
  - (3) 1,2-dichloroethane;
  - (4) 1,1,1-trichloroethane;
  - (5) Cis-1,2-Dichloroethylene;
  - (6) Trans-1,2 Dichloroethylene; or
  - (7) 1,1-dichloroethylene.
- (b) The vinyl chloride samples collected pursuant to (a), above, shall be collected at each sampling point for each source at which any of the 2-carbon organic compounds was detected and confirmed.
- (c) If the initial test results collected pursuant to (a), above, include analytical results for vinyl chloride, the results shall be counted as the first of 4 required quarterly samples.
- (d) If vinyl chloride is not detected in the first quarterly sample, the department shall reduce the required monitoring for vinyl chloride to one sample during each compliance period.
- (e) If monitoring frequency is not reduced pursuant to (d), above, then after a minimum of one year of quarterly sampling the system owner may submit a written request to the department as specified in (f), below, for the monitoring frequency be reduced.
  - (f) The written request shall contain the following:

- (1) The name of the PWS;
- (2) The EPA identifier for the PWS;
- (3) A summary of all quarterly sampling results; and
- (4) Whether any type of treatment to reduce vinyl chloride has been or is being used by the PWS.
- (g) The department shall reinstate annual monitoring for vinyl chloride in response to a request submitted pursuant to (e), above, if the department determines that:
  - (1) Based on 4 consecutive quarterly samples, the level of vinyl chloride is reliably and consistently below the MCL; and
  - (2) The PWS is not operating any type of treatment to reduce the amount of vinyl chloride.

# Env-Dw 712.06 <u>Laboratory Methods and Sampling Protocol for VOC Contaminants.</u>

- (a) Analyses for VOC contaminants shall be conducted only by laboratories that are accredited by the department for such analyses pursuant to Env-C 300.
- (b) The sampling protocol for VOC contaminants shall be as shown in Table 712-1, below, subject to the notes specified in (c), below:

Table 712-1
Sample Protocol for VOC Contaminants

Contaminant	Preservative A	Container B	Maximum holding time <sup>C</sup>
VOC		G	2 weeks

- (c) The following notes shall apply to Table 712-1:
  - (1) "A" means that:
    - a. If nitric acid (HNO<sub>3</sub>) cannot be used because of shipping restrictions, the sample shall be preserved initially by icing and immediately shipped to the laboratory;
    - b. Upon receipt in the laboratory, the sample shall be acidified with concentrated  $HNO_3$  to pH less than 2; and
    - c. At time of analysis, the sample container shall be thoroughly rinsed with 1:1 HNO<sub>3</sub> with the washings being added to the test sample;
  - (2) "B" means that the sample container shall be made of glass, where the letter "G" means glass; and
  - (3) "C" means that in all cases, samples shall be analyzed as soon after collection as possible.

## Env-Dw 712.07 Compliance Determination for VOC Contaminants.

- (a) Compliance with Env-Dw 705.01 shall be determined based on the analytical results obtained at each sampling point identified in the sampling schedule established pursuant to Env-Dw 708.01.
- (b) For a PWS at which monitoring is conducted at a frequency greater than annually, the following shall apply:
  - (1) The department shall determine compliance based on a running annual average, as defined in Env-Ws 302 or successor rules in Env-Dw 100, of all samples collected at each sampling point;

- (2) If the running annual average of any sampling point is greater than the MCL, the PWS shall be out of compliance; and
- (3) If any sample result is more than 4 times the MCL at any sample point, the PWS shall be out of compliance.
- (c) For purposes of determining the running annual average, any sample below the detection limit shall be calculated as zero.
- (d) If monitoring is conducted annually or less frequently, the PWS shall be out of compliance if the level of a VOC contaminant at any sampling point is greater than the MCL. If confirmation samples are required by Env-Dw 712.03, the determination of compliance shall be based on the average of the initial and confirmation samples.

## Env-Dw 712.08 Reporting for VOC Contaminants.

- (a) A PWS owner shall report VOC contaminants in accordance with Env-Dw 719.01.
- (b) If a PWS has a distribution system with portions that are hydraulically separate from other parts of the distribution system, the PWS owner may request approval from the department pursuant to Env-Ws 351.06 or successor rule in Env-Dw 801 to limit the public notice to only that area hydraulically served by that portion of the PWS which is out of compliance.

## Env-Dw 712.09 Monitoring Location for SOCs.

- (a) The owner of a groundwater system shall collect at least one sample to be analyzed for SOCs at every entry point to the distribution system, which entry point is representative of each well after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.
- (b) The owner of a system supplied by surface water or a combination of surface water and groundwater shall collect at least one sample to be analyzed for SOCs at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.
- (c) If the owner believes that conditions make another sampling point more representative of a source, treatment plant or distribution system, the owner shall request a change in sampling location pursuant to Env-Dw 708.04.

#### Env-Dw 712.10 Monitoring Frequency for SOCs.

- (a) The owner of a community water system or non-transient, non-community water system shall monitor for SOCs on an annual basis, except that monitoring shall not be required for aldicarb, aldicarb sulfoxide, or aldicarb sulfone.
- (b) The owner of a community water system or non-transient non-community water system at which no SOC listed in Env-Dw 705.02 is detected may apply to the department for a waiver from the requirement of this section as specified in Env-Dw 712.19.
- (c) The department shall reduce the sampling frequency to a minimum of one sample during each successive 3-year compliance period if a waiver is granted pursuant to Env-Dw 712.19.

## Env-Dw 712.11 Revised Monitoring For SOCs.

- (a) If any SOC listed in Env-Dw 705.02 is detected in any sample, the department shall revise the sampling requirements to quarterly for that contaminant at each representative sampling site.
  - (b) The revised monitoring schedule for each source for the particular contaminant shall continue

until the concentration of the contaminant in each source is reliably and consistently below the MCL.

- (c) The PWS owner may submit a written request as specified in (d), below, for the monitoring frequency to be reduced after a minimum of 4 consecutive quarterly samples for surface water systems or 2 consecutive quarterly samples for groundwater systems.
  - (d) A written request submitted pursuant to (c), above, shall contain:
    - (1) The name of the PWS;
    - (2) The EPA identifier for the PWS;
    - (3) A summary of all sampling results; and
    - (4) Whether any type of treatment to reduce SOC contaminants has been or is being used by the PWS.
- (e) The department shall reinstate annual monitoring for SOC contaminants in response to a request submitted pursuant to (d), above, if the department determines that:
  - (1) Based on 4 consecutive quarterly samples, the level of SOC the level of SOC contaminant(s) previously detected is reliably and consistently below the MCL; and
  - (2) The PWS is not operating any type of treatment to reduce the amount of SOC contaminants.
- (f) A PWS which monitors annually shall monitor during the quarter which previously yielded the highest analytical results.
- (g) A PWS which has 3 consecutive annual samples with no detection of an SOC may apply to the department for a waiver as specified in Env-Dw 712.19.

#### Env-Dw 712.12 Laboratory Methods and Sample Protocol for SOCs.

- (a) Analysis for SOCs shall be conducted only by laboratories that are accredited by the department for such analyses pursuant to Env-C 300.
- (b) The sampling protocol for SOCs shall be as specified in Table 712-2, subject to the notes in (c), below:

Table 712-2
Sample Protocol for SOCs

Contaminant	Preservative A	Container B	Maximum holding time <sup>C</sup>
SOCs	Sodium Thiosulfate	G	2 weeks

- (c) The following notes shall apply to Table 710-1:
  - (1) "A" means that:
    - a. If nitric acid (HNO<sub>3</sub>) cannot be used because of shipping restrictions, the sample shall be preserved initially by icing and immediately shipped to the laboratory;
    - b. Upon receipt in the laboratory, the sample shall be acidified with concentrated  $HNO_3$  to pH less than 2; and
    - c. At time of analysis, the sample container shall be thoroughly rinsed with 1:1 HNO<sub>3</sub> with the washings being added to the test sample;
  - (2) "B" means that the sample container shall be made of glass, where the letter "G" means glass; and

(3) "C" means that in all cases, samples shall be analyzed as soon after collection as possible.

## Env-Dw 712.13 Compliance Determination for SOCs.

- (a) Compliance with Env-Dw 705.02 shall be determined using the analytical results obtained at each sampling point which is an entry point to the distribution system, as specified in the sampling schedule established pursuant to Env-Dw 708.01.
- (b) For any PWS that conducts monitoring at a frequency greater than annually, the department shall determine compliance by calculating a running annual average of all samples collected at each sampling point. If the annual average of any sampling point is greater than the MCL, then the department shall identify the PWS as out of compliance.
- (c) If monitoring is conducted annually or less frequently, then the department shall identify the PWS as being out of compliance if the level of a contaminant at any sampling point is greater than the MCL.
- (d) If a PWS has a distribution system with portions that are hydraulically separate from other parts of the distribution system, the PWS owner may request approval from the department pursuant to Env-Ws 351.06 or successor rule in Env-Dw 801 to limit the notice to only that portion that is out of compliance.
- Env-Dw 712.14 <u>Reporting SOCs</u>. A PWS owner shall report regulated synthetic organics in accordance with Env-Dw 719.01.

## Env-Dw 712.15 Monitoring for Endrin.

- (a) Monitoring conducted by the owner of a CWS or NTNC for the pesticide endrin for purposes of determining compliance with the MCL shall be conducted in accordance with this section.
  - (b) The system owner shall collect samples to be analyzed for endrin if endrin has been used:
    - (1) In the watershed of the surface water, for a system using surface water alone or in combination with groundwater; or
    - (2) Within the recharge area of the system's well or wells, for a system using only groundwater.
- (c) Samples shall be taken and analyzed during June through September, when contamination by pesticides is most likely to occur, at the intervals specified in the sampling schedule established pursuant to Env-Dw 708.01, which shall be no less frequently than at 3-year intervals.
  - (d) If the level of endrin exceeds the MCL, the system owner shall:
    - (1) Report the exceedance to the department within 7 days; and
    - (2) Conduct 3 additional analyses within one month.
- (e) If the average of the original result and the 3 results obtained pursuant to (d), above, rounded to the same number of significant figures as the MCL, exceeds the MCL, the system owner shall:
  - (1) Report to the department pursuant to Env-Dw 719.01; and
  - (2) Give notice to the public pursuant to Env-Ws 351 and Env-Ws 357.40(b) or successor rules in Env-Dw 800.
- (f) After giving public notification pursuant to (e)(2), above, the system owner shall continue to monitor for endrin until the MCL has not been exceeded in 2 successive samples or until a monitoring schedule as a condition to a variance, exemption, or enforcement action becomes effective.

# Env-Dw 712.16 PCB Monitoring.

- (a) The owner of a CWS or NTNC that is vulnerable to PCB contamination due to the current or historical presence of electrical transformers in which PCBs may be present shall collect one sample from the source during the pump test required by Env-Dw 301 or Env-Dw 302, as applicable, and analyze each sample using method 505 or 508 specified in 40 CFR 141.24.
- (b) If PCBs, as one of 7 Aroclors, are detected in an initial pump test sample, the system owner shall reanalyze the sample using method 508A specified in Env-C 306.05.
- (c) The department shall determine compliance with the PCB MCL based on the quantitative results of analyses using method 508A.

## Env-Dw 712.17 Monitoring and Compliance Determination for Disinfection Byproducts.

- (a) The owner of a community water system shall monitor for disinfection byproducts as specified in Env-Dw 715.
- (b) Compliance with the disinfection byproduct monitoring requirements shall be as specified in Env-Dw 715.
- Env-Dw 712.18 Monitoring for Acrylamide and Epichlorohydrin. Each PWS owner shall certify annually in writing to the department that when acrylamide and epichlorohydrin are used in drinking water systems, the combination of dose and monomer level does not exceed the levels specified in Env-Dw 705.05.

# Env-Dw 712.19 VOC and SOC Chemical Monitoring Waivers.

- (a) For purposes of this section, the following definitions shall apply:
  - (1) "Source water protection area" means:
    - a. For groundwater sources, the wellhead protection area as defined in RSA 485-C:2, XVIII, namely "the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield"; and
    - b. For surface water sources, the surface area draining toward the intake within 4,000 feet of the intake as determined by topographic data and on-site verification; and
  - (2) "Pesticide application area" means any area that is treated with pesticides or fertilizers that contain pesticides, as defined in Pes 101.21, within the past 3 years or are likely to be treated with pesticides within the next 3 years including, but not limited to, golf courses, lawn or landscaped areas, cemeteries, agricultural areas, athletic or recreational fields, commercial food crops, pesticide storage areas, rights-of-way, railroads, and large overhead power lines.
- (b) The owner of a community water system or a non-transient non-community water system who wishes to request a waiver or reduction in monitoring requirements for one or more volatile organic compound (VOC) contaminants or synthetic organic chemical (SOC) contaminants, where authorized by Env-Dw 712.01, shall submit the following information in writing to the department on forms supplied by the department:
  - (1) The name of the PWS;
  - (2) The location, including street address, of the PWS;
  - (3) The EPA identifier for the PWS:
  - (4) The name, mailing address, and daytime telephone number of the PWS owner;

- (5) The name and daytime telephone number and, if available, the e-mail address of the individual who completed the application;
- (6) The name of the individual responsible for distributing educational materials on behalf of the PWS;
- (7) For each system source, the type and location of the source;
- (8) The results of all VOC and SOC analyses for each source within one year of the waiver request; and
- (9) Source water protection area information including:
  - a. The maximum daily withdrawal volume;
  - b. Identification of known and potential contamination sources, as defined in Env-Dw 301.03(s), within the source water protection area; and
  - c. Identification of land uses for the following areas:
    - 1. For wells, within the sanitary protective area established in accordance with Env-Ws 372 or Env-Ws 373 or successor rules in subtitle Env-Dw, or in accordance with Env-Dw 301 or Env-Dw 302 or predecessor rules in Env-Ws 378 or Env-Ws 379; and
    - 2. For surface water sources, within the source water protection area.
- (c) The request shall be signed by the individual identified pursuant to (b)(5), above. Such signature shall constitute certification that the information provided is true, complete, and not misleading to the individual's knowledge and belief.
  - (d) No request shall be granted if the PWS:
    - (1) Has not resolved each significant deficiency identified by the department in accordance with Env-Ws 306 or successor rules in Env-Dw 720;
    - (2) Has not corrected each deficiency or violation identified in an administrative order or letter of deficiency issued by the department;
    - (3) Does not have an active primary water system operator as required by Env-Dw 502;
    - (4) Has not paid its permit-to-operate fee as specified in Env-Dw 501;
    - (5) Is not in compliance with the lead and copper requirements specified in Env-Ws 381 or successor rules in Env-Dw 714;
    - (6) Is not in compliance with the emergency plan requirements specified in Env-Ws 360.15 or successor rules in subtitle Env-Dw, if applicable;
    - (7) Is not in compliance with the consumer confidence report requirements specified in Env-Ws 352 or successor rules in Env-Dw 800, if applicable;
    - (8) Is not in compliance with the monitoring requirements specified in Env-Ws 707 though 713 and Env-Env-Dw 719; or
    - (9) Has submitted an incomplete request or a request that contains false information.
  - (e) No VOC waiver shall be granted if:
    - (1) There is any structure of any size or type within the sanitary protective area from which there is a discharge to the ground or groundwater of any substance other than potable water from hydrants, blow-offs, sampling taps, or other such structures;

- (2) There is any structure of any size or type, other than the pumphouse, within the sanitary protective area in which regulated substances as defined in Env-Wq 401 are stored, used, or handled, other than chemicals or other substances necessary for treatment processes in the pumphouse;
- (3) The well is situated within 50 feet of a parking lot;
- (4) The well is situated within 25 feet of a trail used by off-highway recreational vehicles as defined in RSA 215-A:1, VI (OHRV), or snowmobiles as defined in RSA 251-A:1, XIII, or both;
- (5) The surface water intake is situated within 200 feet of a trail used by OHRV or snowmobiles, or both;
- (6) There is a known source of contamination within the source water protection area that has not been designated as closed or inactive by the department;
- (7) The PWS is on mandatory VOC sampling;
- (8) The source has had a confirmed detection of a regulated VOC within the previous 3 years;
- (9) The sanitary protective area contains any disposal systems for solid waste or wastewater, such as dumpsters or septic tanks, grease traps, or effluent disposal areas;
- (10) The sanitary protective area contains any storage tanks for hazardous chemicals or petroleum products such as oil, gasoline, propane, or natural gas, other than:
  - a. A tank used exclusively to store potable water treatment chemicals;
  - b. A home heating oil tank located within an intact concrete structure such as a basement;
  - c. A home heating oil tank located on an impervious surface with a roof, secondary containment, and protected from collision; or
  - d. An above-ground tank used to store propane or natural gas only;
- (11) There is an on-site VOC treatment system;
- (12) There is an auto salvage yard, as defined in RSA 236:112, or underground storage tank that contains petroleum products or other regulated substances, except propane, within 1,000 feet of the source or intake and within the source water protection area; or
- (13) There is confirmed detection of MTBE at any level in wells located within 1,000 feet of the source within the past 3 years.
- (f) The department shall grant a 3-year VOC waiver if none of the disqualifying conditions identified in (d) or (e), above, are present.
  - (g) No SOC waiver shall be granted if:
    - (1) The PWS is on a mandatory SOC sampling program;
    - (2) There is an on-site SOC treatment system; or
    - (3) The source has had a confirmed detection of a regulated SOC within the previous 3 years.
  - (h) The department shall grant a 3-year SOC waiver if:
    - (1) None of the disqualifying conditions identified in (d) or (g), above, are present; and
    - (2) Any of the following conditions exist:
      - a. The source is within a pesticide application area;

- b. The source is located under a power line unless an agreement and consent for joint use with the power line company and system to not use SOCs in the sanitary protection area (SPA) has been obtained; or
- c. The source is within 50 feet of an active railroad.
- (i) The department shall grant a 6-year SOC waiver if none of the disqualifying conditions identified in (d), (g), or (h)(3) above, are present.
- (j) A waiver shall be valid for the applicable time established in (f), (h), or (i), above, from the date of the most recent sampling for the contaminant for which the waiver is granted.
- (k) As a condition of any waiver granted under (f), (h), or (i), above, the PWS owner shall distribute educational materials provided by the department within 90 days of waiver approval and at least once every 3 years thereafter to:
  - (1) Residents within the source water protection area; and
  - (2) Owners of known and potential contamination sources within the source water protection area.
- (*l*) The PWS owner shall certify to the department that the educational materials have been distributed as required by (k), above, before the due date stated in the application approval letter.
- (m) As a condition of any waiver granted under this section for sources producing greater than 57,600 gpd and for systems that serve greater than 1,000 people, the PWS owner shall conduct inspections of all potential contamination sources to ensure compliance with the best management practices specified in Env-Wq 401 at least once every 3 years and prior to the renewal due date.
- (n) The PWS owner shall certify to the department that the inspections have been completed with the renewal application.

## PART Env-Dw 713 MONITORING FOR SECONDARIES

Env-Dw 713.01 <u>Monitoring for Regulated Secondary MCLs</u>. The owner of a community water system or non-transient, non-community water system shall monitor to determine compliance with the secondary MCLs specified in Env-Dw 706, as applicable, in accordance with this part.

## Env-Dw 713.02 Monitoring Location.

- (a) The owner of a system served by groundwater shall collect at least one sample at every entry point to the distribution system which is representative of each well after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.
- (b) The owner of a system served by surface water shall collect at least one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment, as specified in the sampling schedule established pursuant to Env-Dw 708.01.
- (c) If the system owner believes that conditions make a sampling point other than that established in the sampling schedule more representative of each source or treatment plant, the owner shall request a change in sampling location pursuant to Env-Dw 708.04.
- (d) If a system draws water from more than one source and the sources are combined before distribution, the system owner shall sample at an entry point to the distribution system during periods of normal operating conditions, when water is representative of all sources being used.

Env-Dw 713.03 <u>Monitoring Frequency</u>. The system owner shall monitor for the SMCLs listed in Env-Dw 706 once every 3 years.

#### Env-Dw 713.04 Sample Collection Protocol.

(a) Samples shall be collected using the sample preservation, container, and maximum holding time procedures specified in the Table 713-1, subject to the notes in (b), below:

Table 713-1
Sample Protocol for Secondary Contaminants

Contaminant	Volume (ml)	Conditions <sup>A</sup>	Container B	Maximum Holding Times <sup>C</sup>
Aluminum	200 ml	Conc HNO <sub>3</sub> to $<$ pH 2	P or G	6 months
Chloride	50	Cool to 4°C	P or G	28 days
Color	50	Cool to 4°C	P or G	48 hr
Copper	200	Conc HNO <sub>3</sub> to < pH 2	P or G	6 months
Fluoride		Cool to 4°C	P or G	28 days
Foaming Agents	250	Cool to 4°C	P or G	48 hours
Iron	200	Conc HNO <sub>3</sub> to $<$ pH 2	P or G	6 months
Manganese	200	Conc HNO <sub>3</sub> to $<$ pH 2	P or G	6 months
Odor	200	Cool to 4°C	G	24 hrs
pН	25	None	P or G	Immediately
Sulfate	50	Cool to 4°C	P or G	28 days
TDS		Cool to 4°C	P or G	7 days
Zinc	200	Conc HNO <sub>3</sub> to $<$ pH 2	P or G	6 months

- (b) The following notes shall apply to Table 713-1:
  - (1) "A" means that:
    - a. If nitric acid (HNO<sub>3</sub>) cannot be used because of shipping restrictions, the sample shall be preserved initially by icing and immediately shipped to the laboratory;
    - b. Upon receipt in the laboratory, the sample shall be acidified with concentrated HNO<sub>3</sub> to pH less than 2; and
    - c. At time of analysis, the sample container shall be thoroughly rinsed with 1:1 HNO<sub>3</sub> with the washings being added to the test sample;
  - (2) "B" means that the sample container shall:
    - a. Be made of hard or soft plastic, where the letter "P" means plastic; or
    - b. Be made of glass, where the letter "G" means glass; and
  - (3) "C" means that in all cases, samples shall be analyzed as soon after collection as possible.

Env-Dw 713.05 <u>Increased Monitoring after an Exceedance</u>. The owner of a system where the SMCL is exceeded and consumer complaints have been documented shall monitor based on a schedule established by the department in accordance with Env-Dw 708.

#### Env-Dw 713.06 Annual Fluoride Public Notice for Secondary MCL Exceedance.

(a) The owner of a system where the SMCL for fluoride is exceeded shall provide annual public notice as specified in Env-Ws 359 or successor rule in Env-Dw 800.

(b) The public notice shall list the most recent sample result(s) used to determine compliance.

Env-Dw 713.07 Reporting. Reporting shall comply with Env-Dw 719.01.

Env-Dw 713.08 Sodium.

- (a) The owner of a community water system or non-transient non-community water system shall collect and analyze one sample per plant at the entry point of the distribution system, as specified in the sampling schedule established pursuant to Env-Dw 708.01, for the determination of sodium concentration levels.
  - (b) Samples shall be collected and analyzed:
    - (1) Annually, for systems using surface water sources in whole or in part; and
    - (2) Subject to (c), below, once every 3 years for systems using groundwater only.
- (c) The department shall establish a more frequent monitoring schedule for a system using groundwater only if a source is in a location where the sodium content is variable.
- (d) Subject to (e), below, the system owner shall report the results of the analyses for sodium to the department within the earlier of:
  - (1) The first 10 days of the month following the month in which the sample results were received; or
  - (2) The first 10 days following the end of the required monitoring period.
- (e) If more than annual sampling is required, the system owner shall report the average sodium concentration within 10 days of the month following the month in which the analytical results of the last sample used for the annual average was received.
  - (f) Subject to (g), below, the system owner shall send:
    - (1) A written notice of the sodium levels to appropriate local and state public health officials by direct mail within 3 months; and
    - (2) A copy of each notice required to be provided by (1), above, to the department within 10 days of its issuance.
- (g) The system owner shall not be required to send the notice required by (f), above, if the department provides such notices in lieu of the supplier pursuant to Env-Ws 351.10 or successor rules in Env-Dw 800.

#### **APPENDIX**

Rule Section(s)	State Statute(s) Implemented	Federal Regulation(s) Implemented
Env-Dw 707.01	RSA 485:3, I	
Env-Dw 707.02(a)	RSA 485:3, I (c)	40 CFR 141 Subpart C
Env-Dw 707.02(b)	RSA 485:3, I (c); 485:35	40 CFR 141 101
Env-Dw 707.03	RSA 485:3, I	40 CFR 141.29
Env-Dw 707.04 - 707.05	RSA 485:3, I	
Env-Dw 707.06 - 707.08	RSA 485:3, I	

Env-Dw 708.01 - 708.03	RSA 485:3, I	
Env-Dw 708.01 - 708.03 Env-Dw 708.04 - 708.05	RSA 485:3, I	40 CFR 141.24 (f)
Env-Dw 708.04 - 708.03 Env-Dw 708.06 - 708.08		40 CFK 141.24 (1)
Env-Dw 708.09 Env-Dw 708.09	RSA 485:3, I	40 CFR 141.32
	RSA 485:3, I	40 CFR 141.32
Env-Dw 708.10 - 708.11	RSA 485:3, I	40 CED 141 26, 40 CED 141 66
Env-Dw 708.12	RSA 485:41, I	40 CFR 141.26; 40 CFR 141.66
Env-Dw 709.01 - 709.15	RSA 485:3, I	40 CFR 141.21
Env-Dw 709.16	RSA 485:3, I	40 CFR 141.21 (f)
Env-Dw 709.17	RSA 485:3, I	40 CFR 141.22 (g)
Env-Dw 709.18	RSA 485:3, I	40 CFR 141.63 (a)
Env-Dw 709.19	RSA 485:3, I	40 CFR 141.22 (g)
Env-Dw 710.01	RSA 485:3, I	40 CFR 141.26
Env-Dw 710.02	RSA 485:3, I	40 CFR 141.66
Env-Dw 710.03 - 710.11	RSA 485:3, I; 485:41, I, & IV	40 CFR 141.26
Env-Dw 710.12	RSA 485:41, IV	40 CFR 141 Appendix
Env-Dw 711.01 - 711.03	RSA 485:3, I (c)	40 CFR 141.23(a)
Env-Dw 711.04	RSA 485:3, I (c)	40 CFR 141.23(a)
Env-Dw 711.05 - 711.07	RSA 485:3, I (c)	40 CFR 141.23(a)
Env-Dw 711.08	RSA 485:41, IV	40 CFR 141.31
Env-Dw 711.09 - 711.15	RSA 485:3, I (c)	40 CFR 141.23(b)
Env-Dw 711.16	RSA 485:41, IV	40 CFR 141
Env-Dw 711.17	RSA 485:3, I	40 CFR 141.23 (b)
Env-Dw 711.18 - 711.22	RSA 485:3, I	40 CFR 141.23
Env-Dw 711.23	RSA 485:41, IV	40 CFR 141.31
Env-Dw 711.24 - 711.28	RSA 483:3, I	40 CFR 141.23
Env-Dw 711.29	RSA 485:41, IV	40 CFR 141.31
Env-Dw 712.01 - 712.02	RSA 485:3, I	40 CFR 141.40
Env-Dw 712.03	RSA 485:3; 485:41	40 CFR 141.24
Env-Dw 712.04	RSA 485:3, I	
Env-Dw 712.05	RSA 485:3, I	40 CFR 141.24 (f)
Env-Dw 712.06 - 712.07	RSA 485:3, I	40 CFR 14.23 (k)
Env-Dw 712.08	RSA 485:41, IV	40 CFR 141.23
Env-Dw 712.09 - 712.10	RSA 485:3, I	40 CFR 141.24 (f)
Env-Dw 712.11	RSA 485:3, I	, ,
Env-Dw 712.12	RSA 485:3, I	
Env-Dw 712.13	RSA 485:3, I	
Env-Dw 712.14	RSA 485:41, IV	40 CFR 141.31
Env-Dw 712.15 - 712.16	RSA 485:3, I	40 CI K 141.31
Env-Dw 712.17	RSA 485:3, I(c)	40 CFR 141.132
Env-Dw 712.17	RSA 485:3, I	40 CFR 141.30
Env-Dw 712.19	RSA 485:3, I	40 CFR 141.24(e)(6)
Env-Dw 713.01 - 713.05	RSA 485:3, II	40 CFR 141.24(e)(0)
Env-Dw 713.06	RSA 485:3, I(c)	TO CLIK 1TJ.T
Env-Dw 713.00 Env-Dw 713.07	RSA 485:41, IV	40 CFR 141.31
Env-Dw 713.07 Env-Dw 713.08	RSA 485:3, II	40 CFR 141.31
EIIV-DW /13.00	NSA 403.3, II	